

SWEETWATER DIB 2 - TRIANGULAR LOT

LANDSCAPE CONSTRUCTION DOCUMENTS

2500 SWEETWATER SPRINGS BLVD.
SPRING VALLEY, CA

GENERAL NOTES	ABBREVIATIONS	VICINITY MAP	SHEET INDEX																					
<div><div>1. VISIT SITE PRIOR TO SUBMITTING BIDS.</div><div>2. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY SHOULD FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLANS.</div><div>3. DO NOT SCALE DRAWINGS.</div><div>4. ALL WORK CONSTRUCTION AND MATERIALS SHALL COMPLY WITH ALL PROVISIONS OF THE LATEST BUILDING CODE AND WITH OTHER RULES, REGULATIONS AND ORDINANCES GOVERNING THE LOCATION OF THE WORK. BUILDING CODE REQUIREMENTS TAKE PRECEDENCE OVER THE DRAWINGS AND IT SHALL BE THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR OR MATERIALS OR BOTH TO BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT ANY DISCREPANCIES OR CONFLICT BETWEEN THE REQUIREMENTS OF THE CODE AND THE DRAWINGS.</div><div>5. REFERENCE TO ANY DETAIL OR DRAWING IS FOR CONVENIENCE ONLY AND DOES NOT LIMIT THE APPLICATION OF SUCH DETAIL OR DRAWINGS.</div><div>6. DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTIONS SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.</div><div>7. GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED OTHERWISE.</div><div>8. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE UNLESS OTHERWISE SHOWN; THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE LANDSCAPE ARCHITECT SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR SAME, WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ANY SUPPORT SERVICES PERFORMED BY THE LANDSCAPE ARCHITECT DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE LANDSCAPE ARCHITECT, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED BEFORE, DURING OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE GENERAL CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.</div><div>9. A PROTECTION FENCE SHALL BE CONSTRUCTED AND MAINTAINED DURING CONSTRUCTION CONFORMING TO THE REQUIREMENTS OF THE BUILDING CODE.</div><div>10. MAINTAIN SANITARY TOILET FACILITIES DURING CONSTRUCTION AS REQUIRED BY APPLICABLE REGULATIONS.</div><div>11. THE GENERAL CONTRACTOR WARRANTS TO THE OWNER AND THE LANDSCAPE ARCHITECT THAT ALL MATERIALS AND EQUIPMENT FURNISHED WILL BE NEW UNLESS OTHERWISE SPECIFIED AND THAT ALL WORK WILL BE OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS.</div><div>12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK AND/OR EQUIPMENT SUPPLIED BY THE OWNER.</div><div>13. PROVIDE FACILITIES FOR THE PHYSICALLY HANDICAPPED IN ACCORDANCE WITH C.A.C. TITLE 24 AND AS REQUIRED BY THE LATEST VERSION OF THE CALIFORNIA BUILDING CODE.</div><div>14. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE GENERAL CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.</div><div>15. PAVING, MASONRY AND CONCRETE SUBCONTRACTORS ARE TO COORDINATE WITH THE ELECTRICIAN, DRAINLINE SUBCONTRACTOR AND IRRIGATION SUBCONTRACTOR FOR SLEEVEING, PIPING AND/OR CONDUIT INSTALLATION UNDER OR THROUGH HARDSCAPE ELEMENTS.</div><div>16. VERIFY ALL PROPERTY LINES OR OTHER LIMIT OF WORK LINES PRIOR TO COMMENCING WORK.</div><div>17. IN THE CASE OF DISCREPANCIES IN THE DRAWINGS, SPECIFICATIONS TAKE PRECEDENCE OVER DETAILS, AND DETAILS TAKE PRECEDENCE OVER PLANS.</div><div>18. SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE OWNER.</div><div>19. THE GENERAL CONTRACTOR SHALL ENSURE THAT ALL TRADES ARE PROVIDED WITH CURRENT DRAWINGS AND SPECIFICATIONS APPROVED FOR CONSTRUCTION. DO NOT ALLOW DOCUMENTS NOT APPROVED FOR CONSTRUCTION TO BE USED IF SEEN ON SITE. KEEP ONE SET OF AGENCY-APPROVED STAMPED PLANS ON SITE IN CASE CITY INSPECTORS REQUIRE PROOF OF CITY-APPROVED PLANS.</div><div>20. REPAIR OR REPLACE ANY DAMAGE TO ADJACENT PROPERTIES, CURBS, WALKS, PLANTING, WALLS, ETC. AT NO ADDITIONAL COST TO THE OWNER.</div><div>21. LOCATIONS OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS, SIGNS, VENTS, HYDRANTS, TRANSFORMERS, ETC. ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.</div><div>22. PROVIDE THE OWNER WITH ALL WARRANTIES, GUARANTEES, AND INSTRUCTION MANUALS FOR EQUIPMENT, APPLIANCES, FIXTURES, ETC. AS DESCRIBED IN THE SPECIFICATIONS.</div><div>23. NOTIFY THE CITY'S AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.</div><div>24. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.</div><div>25. CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING AND ARCHITECTURAL PLANS BEFORE BEGINNING WORK.</div><div>26. LANDSCAPE ARCHITECT SHALL HAVE FINAL SAY ON INTERPRETATION OF ALL INFORMATION CONTAINED IN THE LANDSCAPE CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND ASSOCIATED REPORTS FOR THE PROJECT.</div></div> <div><div>@ AT</div><div>€ CENTERLINE</div><div># NUMBER</div><div>AC ASPHALTIC CONCRETE</div><div>CF CUBIC FOOT</div><div>CLR CLEAR</div><div>CONC CONCRETE</div><div>CTR CENTER</div><div>DIA DIAMETER</div><div>DIM DIMENSION</div><div>EJ EXPANSION JOINT</div><div>EQ EQUAL</div><div>E.W. EACH WAY</div><div>EX. EXISTING</div><div>FG FINISH GRADE</div><div>FS FINISH SURFACE</div><div>GA GAUGE</div><div>GALV GALVANIZED</div><div>HORIZ HORIZONTAL</div><div>HT HEIGHT</div><div>I.D. INSIDE DIAMETER</div><div>INCL INCLUDING</div><div>INV INVERT ELEVATION</div><div>L.O.W. LIMIT OF WORK</div><div>M METER</div><div>MAX MAXIMUM</div><div>MFR MANUFACTURER</div><div>MH MANHOLE</div><div>MIN MINIMUM</div><div>MISC MISCELLANEOUS</div><div>N.A.P. NOT A PART</div><div>NCN NO COMMON NAME</div><div>NIC NOT IN CONTRACT</div><div>NTS NOT TO SCALE</div><div>O.C. ON CENTER</div><div>O.D. OUTSIDE DIAMETER</div><div>PL PROPERTY LINE</div><div>P.A. PLANTER AREA</div><div>P.I.P. POURED IN PLACE</div><div>R RADIUS</div><div>REV REVISION</div><div>R.O.W. RIGHT OF WAY</div><div>SHT SHEET</div><div>SPEC SPECIFICATION</div><div>SF SQUARE FOOT</div><div>SQ SQUARE</div><div>SS STAINLESS STEEL</div><div>STD STANDARD</div><div>T TRANSFORMER</div><div>T.C. TOP OF CURB</div><div>T.D. TOP OF DRAIN</div><div>T.R. TOP OF RAILING</div><div>T.S. TOP OF STEP</div><div>T.W. TOP OF WALL</div><div>TYP TYPICAL</div><div>VERT VERTICAL</div><div>W/ WITH</div><div>W.I. WROUGHT IRON</div><div>WT WEIGHT</div></div> <div></div> <table><thead><tr><th>SHEET NO.</th><th>DESCRIPTION</th><th>SCALE</th></tr></thead><tbody><tr><td>1</td><td>LANDSCAPE COVER SHEET</td><td>N.T.S.</td></tr><tr><td>2 - 3</td><td>IRRIGATION LEGEND & CALCULATIONS</td><td>--</td></tr><tr><td>4 - 5</td><td>IRRIGATION PLAN</td><td>1" = 20'</td></tr><tr><td>6</td><td>IRRIGATION NOTES</td><td>--</td></tr><tr><td>7 - 11</td><td>IRRIGATION DETAILS</td><td>AS SHOWN</td></tr><tr><td>12 - 13</td><td>PLANTING PLAN</td><td>1" = 20'</td></tr><tr><td>14 - 15</td><td>PLANTING DETAILS</td><td>AS SHOWN</td></tr></tbody></table> <div>FOR SPECIFICATIONS, SEE SEPARATE BOOKLET</div>	SHEET NO.	DESCRIPTION	SCALE	1	LANDSCAPE COVER SHEET	N.T.S.	2 - 3	IRRIGATION LEGEND & CALCULATIONS	--	4 - 5	IRRIGATION PLAN	1" = 20'	6	IRRIGATION NOTES	--	7 - 11	IRRIGATION DETAILS	AS SHOWN	12 - 13	PLANTING PLAN	1" = 20'	14 - 15	PLANTING DETAILS	AS SHOWN
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UNDERGROUND SERVICE ALERT
CALL: TOLL FREE
811
TWO WORKING DAYS BEFORE YOU DIG

SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT IDENTIFICATION NUMBER CALL UNDERGROUND SERVICE ALERT.



8841 RESEARCH DR
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IRVINE - CA 92618
949.387.1323
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DIGALERT

WARE MALCOMB

CIVIL ENGINEERING

3391 sorrento valley blvd. suite 120 san diego, ca 92121
p 858.638.7277 waremalcomb.com

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN

BY: LUKE A. CORSBIE DATE:

R.C.E. 72588

EXPIRES: 06-30-22

BENCH MARK

DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"

LOCATION: TOP OF CURB INLET ON E'LY SIDE OF JAMACHA BLVD.




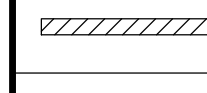
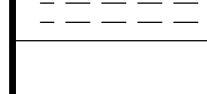

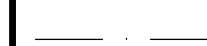
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B


ELEVATION: 518.044_USSF DATUM: NAVD_1988

DATUM:

PRIVATE CONTRACT


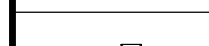
SHEET 1	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
LANDSCAPE COVER SHEET DIB2 - TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN, COUNTY ENGINEER	ENGINEER OF WORK:	
BY:	R.C.E.:	
DATE:	DATE:	
DRAWING PERMIT NO. PDS2021-LDGRMJ-XXXXX		

IRRIGATION PIPE & WIRE LEGEND			
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
	BURIED NON-PRESSURE LATERAL LINE PIPE: SCH. 40 PVC PIPE FOR SIZES 3/4" TO 2-1/2". MINIMUM PIPE SIZE SHALL BE 3/4" - SIZE LATERALS PER PLAN.	X	9
	BURIED PRESSURE IRRIGATION MAINLINE: SCH. 40 PVC PIPE FOR MAINLINE SIZES (1-1/2" AND SMALLER). CLASS 315 PVC PIPE FOR MAINLINE SIZES (2" AND LARGER).	X	9
NO SYMBOL	AS APPROVED - CONCRETE THRUST BLOCKS CONSISTING OF MINIMUM (1) ONE CUBIC FOOT OF CONCRETE (2,000 PSI) SHALL BE INSTALLED FOR ALL MAINLINE 2-1/2" OR GREATER AT ELBOWS AND AT POINT OF CHANGE IN DIRECTION.	Y	10
	SLEEVING - SCH 40 PVC PIPE, EXTEND 12" BEYOND EDGE OF HARDSCAPE. SLEEVE SHALL BE MINIMUM TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED, MINIMUM 2" SIZE.	Z	10
	CONTROL WIRE CONDUIT - SCH. 40 PVC PIPE, INSTALL UNDER PAVED / HARDSCAPE AREAS. CONDUIT SHALL BE MINIMUM TWICE THE DIAMETER OF WIRE BUNDLE CARRIED, MINIMUM 2" SIZE.	Z	10
	AS APPROVED - SCH 40 GALVANIZED STEEL PIPE SLEEVE FOR ALL V-DITCH CROSSINGS.	AA	10
NO SYMBOL	PAIGE ELECTRIC - 7072D, #14/2 AWG, 1/2 CONDUCTOR "MAXI" CABLE, 14 GAUGE 2-WIRE CABLE (RED/BLACK) POLYETHYLENE COATED, "PURPLE" JACKETED WIRE FOR 2-WIRE PATH. INSTALL ALL 2-WIRE CABLE WITHIN 1-1/4" PVC CONDUIT. CONNECT TO CONTROLLER PER MANUFACTURER'S SPECIFICATIONS.	P, Q, R, BB, CC	8 9 10
NO SYMBOL	3M - DBRY-6 DIRECT BURIAL WIRE CONNECTORS FOR USE ON ALL WIRE CONNECTIONS.	BB	10
NO SYMBOL	K.B.I. - KSC-S SWING CHECK VALVE, LINE SIZE. INSTALL ONE DOWNSTREAM OF EACH RCV WHEN RCV IS LOWER THAN THE SPRINKLERS. INSTALL VALVE WITHIN 6" ROUND PLASTIC VALVE BOX.	N/A	N/A
NO SYMBOL	K.B.I. - KC-S SPRING CHECK VALVE, LINE SIZE. INSTALL ONE DOWNSTREAM OF EACH RCV IMMEDIATELY ABOVE FIRST LATERAL LINE TEE. WHEN RCV IS HIGHER THAN THE SPRINKLERS. INSTALL VALVE WITHIN 6" ROUND PLASTIC VALVE BOX. INSTALL WHEN REQUIRED TO PREVENT LOW HEAD DRAINAGE. ABSOLUTELY NO LOW HEAD DRAINAGE ALLOWED.	N/A	N/A
	AS APPROVED - TRANSITION FROM BELOW GRADE LATERAL LINE PVC PIPE TO ON-GRADE ULTRA-VIOLET RESISTANT (UVR) SCH 40 PVC PIPE.	N/A	N/A
	ON-GRADE NON-PRESSURE LATERAL LINE PIPE: AS APPROVED - ULTRA-VIOLET RESISTANT SCH. 40 PVC PIPE (3/4" - 2") LATERAL LINES INSTALLED ON-GRADE. STAKE PIPE AT 8' O.C. USING #4 REBAR J-HOOKS. INSTALL ON-GRADE UVR PIPE ONLY AT TOP AND MIDDLE OF SLOPES IN AREAS WHERE HEADS ARE GREATER THAN TEN (10) FEET FROM PAVING, CURBS, SIDEWALKS, STEPS, TURF BOUNDARIES OR OTHER PEDESTRIAN AREAS. ALL ON-GRADE UVR PIPE LOCATIONS SHALL BE VERIFIED AND APPROVED IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE AT START OF WORK.	FF, GG, HH	10 11
NOTE: ALL WIRE SPLICES SHALL BE PLACED WITHIN PLASTIC VALVE BOX OR WIRE PULL BOX. WIRE SPLICES MUST BE TWISTED WITH WIRE TWISTING TOOL WITH A MAXIMUM OF TWO WIRES PER TWIST. REFER TO MANUFACTURE RECOMMENDATION FOR PROPER WIRE CONNECTIONS.			
SPlicing RECOMMENDATIONS: WIRE SPLICES ARE THE WEAK LINK OF ANY ELECTRICAL CIRCUIT. IT IS ESPECIALLY IMPORTANT TO MAKE PROPER JOINTS IN IRRIGATION SYSTEMS BECAUSE THE JOINTS ARE EXPOSED TO WET AND DAMP ENVIRONMENTS THAT CAN CAUSE CORROSION OF THE COPPER CONDUCTOR, AND PREMATURE FAILURE. PAIGE ELECTRIC RECOMMENDS THE STRICT USE OF MODEL DBRY-6, AS MANUFACTURED BY THE 3M COMPANY (PAIGE SPECIFICATION P7364D)			


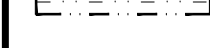
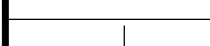


IRRIGATION 2-WIRE EQUIPMENT LEGEND			
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
	RAIN BIRD - LSP-1TURF, LINE SURGE PROTECTOR WITH GROUNDING ROD OR PLATE, PLACED WITHIN 10" ROUND VALVE BOX. LINE SURGE PROTECTION SHALL BE INSTALLED EVERY EIGHT (8) DECODERS OR 500' MAXIMUM DISTANCE OF THE 2-WIRE PATH AND AT ALL DEAD END RUNS.	T, U, V, W	9
NO SYMBOL	RAIN BIRD - FD-101TURF, SINGLE VALVE, 2-WIRE, FIELD DECODER, ONE (1) DECODER REQUIRED PER REMOTE CONTROL VALVE. INSTALL PER MANUFACTURE RECOMMENDATIONS.	N, O, P, Q, R	8 9
NOTE: 1. CONTRACTOR SHALL CONFIRM QUANTITIES AND PROVIDE ONE SURGE PROTECTION AND GROUND ROD #GR-K OR GROUND PLATE #GP3-K AT A MINIMUM OF ONE PER 500' OF TWO WIRE CABLE AND ENDS OF ALL TERMINAL RUNS PER MANUFACTURER RECOMMENDATIONS. 2. ALL DECODERS SHALL BE PROVIDED WITH THE MANUFACTURER APPROVED WIRE CONNECTOR. 3. CONTRACTOR SHALL PROVIDED 2-WIRE CABLE, #14/2 AWG, 14 GAUGE 2-WIRE CABLE (RED/BLACK) POLYETHYLENE COATED, DOUBLE JACKETED (BLUE). ALL WIRE CABLE SHALL BE INSTALLED WITHIN 1-1/4" PVC ELECTRICAL CONDUIT. 4. INSTALL CONTROLLER, 2-WIRE CABLE, WIRE CONNECTORS, DECODERS AND GROUNDING SURGE PROTECTION AND ALL RELATED EQUIPMENT PER MANUFACTURE RECOMMENDATIONS 5. CONTRACTOR SHALL COORDINATE A PRE CONSTRUCTION MEETING WITH IMPERIAL TECHNICAL SERVICES PRIOR TO CONSTRUCTION.			


























FOR CONTINUED IRRIGATION LEGEND REFER TO SHEET 10

IRRIGATION ROTOR HEAD SPRINKLER LEGEND															
SYMBOL			MANUFACTURE / MODEL NO. / DESCRIPTION					FLOW RATE GPM		PSI	RADIUS	PREC RATE	DETAIL	SHEET	
Q	H	F						Q	H	F					
12" POP-UP ROTOR HEAD WITH CHECK VALVE AND PRESSURE REGULATION															
①	②	③	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ NOZZLES Q-.50SR/H-1.0SR/F-2.0SR					.43	.90	1.7	35	16 FT	0.46	I, EE	8 10
④	⑤	⑥	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ NOZZLES Q-.75SR/H-1.5SR/F-3.0SR					.68	1.3	2.7	35	20 FT	0.46	I, EE	8 10
⑦	⑧	⑨	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ NOZZLES Q-1.5 / H-2.5 / F-5.0					1.4	2.1	3.5	35	25 FT	0.46	I, EE	8 10
⑩	⑪	⑫	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ NOZZLES Q-2.0 / H-3.0 / F-6.0					1.7	2.7	5.6	35	30 FT	0.46	I, EE	8 10
⑬	⑭	⑮	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ NOZZLES Q-2.5 / H-4.0 / F-8.0					2.1	3.5	7.0	35	35 FT	0.46	I, EE	8 10
⑯	⑰	⑱	HUNTER - PGP-12-CV, ULTRA SERIES, 12" POP-UP SHRUB ROTOR HEAD W/ RED NOZZLES Q-8 / H-10 / F-12					3.7	6.0	10.5	35	40 FT	0.46	I, EE	8 10
①	②	③	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ NOZZLES Q-.50SR/H-1.0SR/F-2.0SR					.43	.90	1.7	35	16 FT	0.46	K, EE, FF	8 10
④	⑤	⑥	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ NOZZLES Q-.75SR/H-1.5SR/F-3.0SR					.68	1.3	2.7	35	20 FT	0.46	K, EE, FF	8 10
⑦	⑧	⑨	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ NOZZLES Q-1.5 / H-2.5 / F-5.0					1.4	2.1	3.5	35	25 FT	0.46	K, EE, FF	8 10
⑩	⑪	⑫	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ NOZZLES Q-2.0 / H-3.0 / F-6.0					1.7	2.7	5.6	35	30 FT	0.46	K, EE, FF	8 10
⑬	⑭	⑮	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ NOZZLES Q-2.5 / H-4.0 / F-8.0					2.1	3.5	7.0	35	35 FT	0.46	K, EE, FF	8 10
⑯	⑰	⑱	HUNTER - PGP-00, ULTRA SERIES, SHRUB ROTOR HEAD ON RISER W/ RED NOZZLES Q-8 / H-10 / F-12					3.7	6.0	10.5	35	40 FT	0.46	K, EE, FF	8 10
NOTE: HUNTER ULTRA SERIES ROTOR REQUIRE THE INSTALLATION OF THE HUNTER HSJ-0 (3/4") MODEL COMMERCIAL SWING JOINT ASSEMBLY WITH EACH HEAD.															
NOTE: NOZZLES NUMBERS WITHIN THE ROTOR HEAD SYMBOLS DO NOT EXACTLY CORRESPOND TO THE HUNTER NOZZLE NUMBERS. NOZZLE NUMBERS FOR QUARTER, HALF, AND FULL HEADS ARE SHOW WITHIN THE HEAD MODEL NUMBER AS SHOWN IN THE LEGEND.															
NOTE: SHRUB ROTOR HEADS INSTALLED FARTHER THAN TEN (10) FEET FROM PAVING, CURBS, SIDEWALKS, STEPS, TURF BOUNDARIES OR OTHER PEDESTRIAN AREAS MAY BE INSTALLED AS A HUNTER PGP-00 SHRUB ROTOR ON RISER W/ HUNTER "HCV" SERIES 3/4" ANTI-DRAIN CHECK VALVE WITH NOZZLE AS SHOWN.															
NOTE: POP-UP HEADS WITH ELEVATION CHANGES OF 10 FEET OR GREATER FROM HIGHEST HEAD IN ZONE OR HEADS WITH POTENTIAL OF LOW HEAD DRAINAGE WILL REQUIRE THE INSTALLATION OF A SPRING-TYPE ANTI-DRAIN CHECK VALVE. ABSOLUTELY NO LOW HEAD DRAINAGE ALLOWED.															
NOTE: CENTER ROW FULL CIRCLE ROTOR HEADS ON SLOPE SHALL BE INSTALLED 6% - 8% OFF-SET UP SLOPE FROM CENTER TO PROVIDE FULL COVERAGE AT TOP OF SLOPE WITH NO OVERSPRAY AT BOTTOM OF SLOPE.															

IRRIGATION TREE BUBBLER LEGEND							
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPM	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
	RAIN BIRD - 1806-SAM-PRS, W/ HUNTER MSBN-25Q, MULTI-STREAM BUBBLER NOZZLE, SYMBOL REPRESENTS TWO (2) PER TREE.	.25 (.50)	30	1 FT	1.8	L	8
	RAIN BIRD - RWS-B-1401-RWS-SOCK DEEP WELL BUBBLER, EACH SYMBOL REPRESENTS TWO (2) PER TREE.	.25 (.50)	30	N/A	1.8	II	11
NOTE: PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE WITHIN TREE WELL TYPICAL.							

IRRIGATION EQUIPMENT LEGEND			
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	DETAIL	SHEET
	NIBCO - T-580-70-66, BRONZE BALL VALVE WITH STAINLESS STEEL STEM AND HANDLE NUT, LINE SIZE PER MAINLINE.	M	8
	RAIN BIRD - PEB-PRS-D, SERIES (1" OR 1-1/2") PLASTIC REMOTE CONTROL VALVE, SIZE AS SHOWN.	N, DD	8, 10
	RAIN BIRD - PEB, (1" OR 1-1/2") SERIES PLASTIC DRIP REMOTE CONTROL VALVE ASSEMBLY, SIZE AS SHOWN. INSTALL WITH RAIN BIRD MODEL # LCRBY-S, (1" OR 1-1/2") LARGE CAPACITY SCREEN FILTER AND MODEL #PSI-H40X (1" OR 1-1/2") 40 PSI, HIGH FLOW INLINE PRESSURE REGULATOR. FOR DEMANDS 1 - 19 GPM: INSTALL 1" VALVE WITH LCRBY100-S, 1" SCREEN FILTER AND PSI-H40X-100, 1", 40 PSI, HIGH FLOW INLINE PRESSURE REGULATOR. FOR DEMANDS 20 - 55 GPM: INSTALL KCZ-150-LCS, DRIP ZONE KIT WITH 1-1/2" VALVE, LCRBY150-S, 1-1/2" SCREEN FILTER AND PSI-H40X-150, 1-1/2", 40 PSI, HIGH FLOW INLINE PRESSURE REGULATOR.	O, DD	8, 10
	RAIN BIRD - 33DLRC, 3/4" QUICK COUPLER VALVE WITH LOCKING COVER.	S, DD	9, 10

IN-LINE DRIP IRRIGATION LEGEND							
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPH	PSI	RADIUS	PREC. RATE	DETAIL	SHEET
	RAIN BIRD - XFS-CV-6-12, XFS SUB-SURFACE "COPPER SHIELD" SERIES 17mm, 12" O.C. EMITTER, DRIPLINE WITH PRESSURE COMPENSATING, ANTI SIPHON CHECK VALVE AND COPPER SHIELD ROOT INTRUSION PROTECTION EMITTER. 16" MAXIMUM ROW SPACING.	0.61	30	N/A	0.73	A, B, C, D	7
	RAIN BIRD - DRIPLINE CONNECTIONS SHALL BE MADE USING "XF SERIES" 17mm DRIPLINE INSERT FITTINGS. INSTALL STAINLESS STEEL CLAMPS ON FITTINGS FOR ANY SYSTEM THAT EXCEEDS 50 PSI.					E	7
	HUNTER - ECO-ID, POP-UP ECO-INDICATOR WITH YELLOW STEM, DRIP SYSTEM COMBINATION DRIP INDICATOR / FLUSH VALVE. INSTALL WITH "GPH" IRRIGATION PRODUCTS MODEL #GDFN, SERIES FLUSH NOZZLE.					F	7
	RAIN BIRD - ARV-050, 1/2" AIR/VACUUM RELIEF VALVE. LOCATE AT ENDS AND OR HIGHEST POINT OF THE DRIPLINE ZONE. INSTALL INSIDE A 6" ROUND VALVE BOX 18" FROM PAVING.					G	7
	NETAFIM - TL50V, MANUAL SHUT-OFF, FLUSH VALVE. INSTALL FLUSH VALVE WITH STAINLESS STEEL CRIMP CLAMPS INSIDE A 10" ROUND VALVE BOX 18" FROM PAVING. LOCATE AT END OF DRIPZONE IN EACH DIRECTION, MINIMUM TWO PER ZONE.					H	7
DRIP NOTES: A. SUB-SURFACE IN-LINE DRIP TUBING SHALL BE INSTALLED @ 16" MAXIMUM ROW SPACING FOR TYPICAL SHRUB AREAS AND 12" MAXIMUM ROW SPACING FOR ANY GROUND COVER AREAS. INSTALL TUBING WITH TRIANGULAR SPACED EMITTER LAYOUT, 3" BELOW FINISH SOIL GRADE, ANCHORED WITH RAIN BIRD 6" GALVANIZED WIRE STAKES, MODEL #TDS-050 BEND, INSTALLED FIVE (5) FEET ON CENTER. B. INSTALL PERIMETER TUBING MAXIMUM 6" FROM PERIMETER EDGE FOR GROUNDCOVER AREAS OR AT FIRST LINE OF SHRUBS. CONTRACTOR SHALL DETERMINE MINIMUM ROW SPACING IN THE FIELD AFTER REVIEW OF PLANT SPACING FOR EACH PLANTER. EACH AND EVERY SHRUB SHALL RECEIVE WATER FROM A MINIMUM OF TWO INLINE DRIP EMITTERS. AREAS OF TIGHTLY SPACED GROUNDCOVER OR SANDY SOILS WILL REQUIRE CLOSER ROW SPACING. FOR ANY 'SINGLE' OR 'DOUBLE' ROW TYPE PLANTINGS, INSTALL DRIP TUBING ON BOTH SIDES OF THE SHRUB ROW TO IRRIGATE SHRUBS ON EITHER SIDE. DUE TO SOIL STRATA DIFFERENCES AND POSSIBLE COMPACTION CONTRACTOR SHALL FIELD VERIFY PRIOR TO STARTING WORK AND BEFORE BACKFILLING THAT THE FINAL LAYOUT AND ROW SPACING WILL PROVIDE ADEQUATE WATER TO ALL PLANTS. C. FOR SLOPE AREAS CONTRACTOR SHALL ALWAYS FOLLOW AND ROUTE INLINE TUBING PARALLEL TO GRADE. DIRECTIONAL LAYOUT AS SHOWN IN THE PLANS MAY NOT BE EXACTLY ACROSS SLOPE. DRIP HATCH PATTERN ANGLE SHOWN ON PLAN ARE DIAGRAMMATICAL ONLY. ALWAYS INSTALL DRIP LINES ACROSS SLOPE. INSTALL IN-LINE DRIP CHECK VALVE FOR DRIPLINE TUBING WITH 8' OR GREATER ELEVATION CHANGE MINIMUM ONE CHECK VALVE FOR EACH DRIP LINE IN SYSTEM TO PREVENT ANY LOW DRAINAGE. D. FOR ALL INLINE DRIP TUBING AREAS ON SLOPE THE CONTRACTOR SHALL BE HELD ACCOUNTABLE FOR CREATING A TRIANGULAR WETTING PATTERN ACROSS ANY SLOPE. OFFSET THE EMITTERS BY HALF THE EMITTER SPACING WHEN INSTALLING TUBING TO CREATE A TRIANGULAR WETTING PATTERN ACROSS THE SLOPE. DO NOT INSTALL TUBING WHERE THE EMITTERS ARE DIRECTLY IN LINE (PERPENDICULAR) WITH EACH OTHER.							

IRRIGATION ROTATOR HEAD SPRINKLER LEGEND															
SYMBOL			MANUFACTURE / MODEL NO. / DESCRIPTION					FLOW RATE GPM			PSI	RADIUS	PREC. RATE	DETAIL	SHEET
Q	H	F						Q	H	F					
SHRUB ROTATOR HEADS WITH CHECK VALVE AND PRESSURE REGULATION															
			RAIN BIRD - 1812-SAM-P45, W/ HUNTER ROTATOR SERIES MP CORNER NOZZLE.					.17	--	--	40	8-12 FT	.45	I, EE	8 10
			RAIN BIRD - 1812-SAM-P45, W/ HUNTER ROTATOR SERIES MP 1000 NOZZLE.					.18	.35	.65	40	8-12 FT	.45	I, EE	8 10
			RAIN BIRD - 1812-SAM-P45, W/ HUNTER ROTATOR SERIES MP 2000 NOZZLE.					.33	.63	1.27	40	13-17 FT	.45	I, EE	8 10
			RAIN BIRD - 1812-SAM-P45, W/ HUNTER ROTATOR SERIES MP 3000 NOZZLE.					.74	1.84	3.15	40	19-27 FT	.45	I, EE	8 10
			RAIN BIRD - 1812-SAM-P45, W/ HUNTER ROTATOR SERIES MP MPLCS515 / MPRCS515 / MPSS530 NOZZLE.					.19	.19	.38	40	4x14 FT 4x28 FT	.45	I, EE	8 10
			HUNTER - MP ROTATOR SERIES CORNER NOZZLE ON PVC RISER WITH PROS-00-PRS40 SHRUB ADAPTER.					.17	--	--	40	8-12 FT	.45	J, EE, GG	8 10, 11
			HUNTER - MP ROTATOR SERIES 1000 NOZZLE ON PVC RISER WITH PROS-00-PRS40 SHRUB ADAPTER.					.18	.35	.65	40	8-12 FT	.45	J, EE, GG	8 10, 11
			HUNTER - MP ROTATOR SERIES 2000 NOZZLE ON PVC RISER WITH PROS-00-PRS40 SHRUB ADAPTER.					.33	.63	1.27	40	13-17 FT	.45	J, EE, GG	8 10, 11
			HUNTER - MP ROTATOR SERIES 3000 NOZZLE ON PVC RISER WITH PROS-00-PRS40 SHRUB ADAPTER.					.74	1.84	3.15	40	19-27 FT	.45	J, EE, GG	8 10, 11
			HUNTER - MP ROTATOR SERIES MPLCS515 / MPRCS515 / MPSS530 NOZZLE ON PVC RISER WITH PROS-00-PRS40 SHRUB ADAPTER.					.19	.19	.38	40	4x14 FT 4x28 FT	.45	J, EE, GG	8 10, 11
NOTE: MULTI-STREAM ROTARY SPRINKLERS INSTALLED FARTHER THAN FIVE (5) FEET FROM PAVING, CURBS, SIDEWALKS, STEPS, TURF BOUNDARIES OR OTHER PEDESTRIAN AREAS MAY BE INSTALLED ON RISER W/ HUNTER PROS-00-PRS40, PRESSURE REGULATED SHRUB ADAPTER WITH HUNTER "HCV" SERIES ANTI-DRAIN CHECK VALVE WITH NOZZLE AS SHOWN.															
NOTE: POP-UP SPRINKLER HEADS WITH ELEVATION CHANGES OF 10 FEET OR GREATER FROM HIGHEST HEAD IN ZONE OR SPRINKLER ON RISER WITH ANY POTENTIAL OF LOW HEAD DRAINAGE WILL REQUIRE THE INSTALLATION OF A SPRING-TYPE ANTI-DRAIN CHECK VALVE. ABSOLUTELY NO LOW HEAD DRAINAGE ALLOWED.															

FOR I


CONTROLLER SCHEDULING NOTE:
THESE SUGGESTED RUN TIMES ARE FOR REFERENCE ONLY. ACTUAL RUN TIMES MAY DIFFER DUE TO VARYING SITE CONDITIONS. CONTRACTOR SHALL ADJUST RUN TIMES AS REQUIRED TO PROVIDE APPROPRIATE WATER FOR EACH VALVE CIRCUIT. MULTIPLE CYCLES MAY BE REQUIRED TO MINIMIZE PONDING AND RUNOFF ONTO NON-IRRIGATED AREAS.

SEASONAL IRRIGATION SCHEDULE												
Project Name: DIB2 Sweetwater Parking Area							Cycles Per Day: 1					
Meter Number: #1							Days Per Week: 7					
Evapotranspiration Rates:												
Eto Historical:		52.22										
		Winter		Spring		Summer		Fall				
Eto Per Day		0.08		0.16		0.19		0.14				
Eto Per Season		7.5		14.8		17.7		12.3				
Run Times (Minutes per Day) = (60 x Eto x PF) ÷ (PR x IE) x (RD) ÷ (C)							Irrigation Efficiency (%):					
Eto = Daily Evapotranspiration Rate							Rotors: 0.75					
IE = Irrigation Efficiency							Spray Heads: 0.71					
PR = Precipitation Rate (Inches per Hour)							Bubbler Heads: 0.77					
RD = Run days (Seasonal Total)							Drip Line: 0.81					
C = Cycles per Day							Stream Emittor: 0.81					
PF = Plant Factor (Kc)							Stream Rotary: 0.75					
60 = Conversion to minutes							Micro Spray: 0.75					
							Precipitation Rate (in/hr)					
							Rotors: 0.45					
							Spray Heads: 1.60					
							Bubbler Heads: 1.80					
							Drip Line: 0.73					
							Drip Emittor: 0.25					
							Stream Rotary: 0.45					
							Micro Spray: 0.61					
Valve Quantity	Water Use Type	Planting	Irrigation Type	Kc	PR	IE	Winter (Dec, Jan, Feb)	Spring (Mar, Apr, May)	Summer (Jun, Jul, Aug)	Fall (Sep, Oct, Nov)		
4	Low	Shrub	Drip Line	0.20	0.73	0.81	2	3	4	3	Min. Per Day	
2	Low	Shrub	Rotary	0.20	0.45	0.75	3	6	7	5	Min. Per Day	
15	Low	Shrub	Rolor	0.20	0.45	0.75	3	6	7	5	Min. Per Day	
2	Low	Shrub	Drip Emt.	0.50	0.25	0.81	12	24	29	20	Min. Per Day	
1	Low	Tree	Bubbler	0.30	1.80	0.77	1	2	3	2	Min. Per Day	
2	Mod	Tree	Bubbler	0.60	1.80	0.77	2	4	5	4	Min. Per Day	
Total Valves		26	Subtotal Hour Run Times @ 7 Days Per Week				1.4	2.8	3.4	2.4		
Number of RCV's Operating Concurrently							1	1	1	1		
Total Hours of Run Time @ 7 Days Per Week							1.4	2.8	3.4	2.4	Hours Per Day	

Irrigation Efficiency (%):	
Rotors:	0.75
Spray Heads:	0.71
Bubbler Heads:	0.77
Drip Line:	0.81
Drip Emitter:	0.81
Stream Rotary:	0.75
Micro Spray:	0.75

Precipitation Rate (in/hr)	
Rotors:	0.45
Spray Heads:	1.60
Bubbler Heads:	1.80
Drip Line:	0.73
Drip Emitter:	0.25
Stream Rotary:	0.45
Micro Spray:	0.61

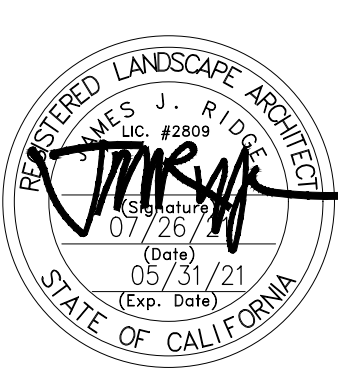
EXISTING EQUIPMENT LEGEND	
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION
	(EXISTING) DOMESTIC WATER IRRIGATION METER. VERIFY SIZE, LOCATION, AND STATIC WATER PRESSURE IN FIELD.
	(EXISTING) R/P BACKFLOW PREVENTION ASSEMBLY. VERIFY AND TEST FOR PROPER OPERATION. HAVE R/P TESTED BY DISTRICT APPROVED BACKFLOW ASSEMBLY TECHNICIAN FOR CERTIFICATION. REPAIR OR REPLACE IF DAMAGED.
NO SYMBOL	(EXISTING) MASTER VALVE. VERIFY AND TEST FOR PROPER OPERATION. REPAIR OR REPLACE IF DAMAGED.
NO SYMBOL	(EXISTING) FLOW SENSOR. VERIFY AND TEST FOR PROPER OPERATION. REPAIR OR REPLACE IF DAMAGED.
	(EXISTING) CONTROLLER. PROTECT IN PLACE. VERIFY AND TEST FOR PROPER OPERATION. REPAIR OR REPLACE IF DAMAGED. VERIFY QUANTITY OF AVAILABLE OPEN STATIONS. INSTALL NEW EXPANSION MODULES OR REPLACE CONTROLLER IF INADEQUATE NUMBER OF OPEN STATION EXIST.
	P.O.C. CONNECTION OF NEW MAINLINE AND CONTROL WIRES TO EXISTING IRRIGATION SYSTEM. VERIFY MAINLINE SIZE, QUANTITY OF WIRES REQUIRED, INCLUDING SPARE WIRES, AND EXACT CONNECTION POINT LOCATIONS IN FIELD.
	(EXISTING) IRRIGATION MAINLINE SHOWN FOR REFERENCE ONLY. PROTECT IN PLACE. REPAIR ANY DAMAGE DUE TO CONSTRUCTION. VERIFY SIZE, TYPE, AND EXACT LOCATION IN FIELD. IF CONTRACTOR IS NOT ABLE TO LOCATE EXISTING MAINLINE CONTRACTOR SHALL PROVIDE AND INSTALL NEW MAINLINE AND MAKE ALL NECESSARY CONNECTIONS FOR PROPER OPERATION OF NEW AND EXISTING IRRIGATION SYSTEM.
	(EXISTING) IRRIGATION SYSTEM TO BE ADJUSTED AND OR MODIFIED. CUT AND CAP EXISTING SYSTEM AS REQUIRED FOR PROPER OPERATION. REPAIR OR REPLACE ANY DAMAGED EQUIPMENT. PROVIDE 100% COVERAGE WITH NO PONDING, RUNOFF OR OVER SPRAY.
	IRRIGATION TIE-IN CONNECTION OF NEW LATERAL LINE TO EXISTING SYSTEM LATERAL LINE. VERIFY SIZE, LOCATION AND CONNECTION POINTS IN FIELD.
	(EXISTING) POP-UP SPRINKLER HEAD. PROTECT IN PLACE. RELOCATE IF REQUIRED TO PROVIDE COMPLETE 100% HEAD TO HEAD COVERAGE WITH NO PONDING, RUNOFF OR OVERSPRAY. REPAIR OR REPLACE IF DAMAGED. VERIFY WITH OWNER'S AUTHORIZED REPRESENTATIVE ANY EQUIPMENT TO BE REUSED PRIOR TO INSTALLATION.

VINE POINT SOURCE DRIP IRRIGATION LEGEND								
SYMBOL	MANUFACTURE / MODEL NO. / DESCRIPTION	GPH	PSI	RADIUS	PREC. RATE	DETAIL	SHEET	
	RAIN BIRD - XBCV-10PC, SERIES PRESSURE COMPENSATING, POINT SOURCE DRIP EMITTER WITH CHECK VALVE. INSTALL WITH 1/4" DISTRIBUTION TUBING, UNIVERSAL TUBING STAKE AND DIFFUSER BUG CAP. EACH SYMBOL REPRESENTS TWO (2) EMITTERS PER VINE.	1.0 (2.0)	30	N/A	0.25	JJ	11	
	RAIN BIRD - XBS-700/940, (1/2" - 3/4") BLANK POLYETHYLENE TUBING: FOR DEMANDS (1 - 4) GPM. INSTALL 1/2" TUBING. FOR DEMANDS (5 - 8) GPM. INSTALL 3/4" TUBING.					JJ	11	
NO SYMBOL	RAIN BIRD - 600/800 SERIES, (1/2" - 3/4") TWIST LOCK FITTINGS. INSTALL FOR ALL POLYETHYLENE DRIP TUBING CONNECTIONS, PER MANUFACTURE RECOMMENDATIONS - SIZE PER TUBING.					N/A	N/A	
NO SYMBOL	RAIN BIRD, XQ-100, 1/4" POLYVINYL DISTRIBUTION TUBING, MAXIMUM LENGTH 5 FEET.					JJ	11	
NO SYMBOL	RAIN BIRD - DBC-025, DIFFUSER BUG CAP. ONE BUG CAP REQUIRED PER EMITTER.					JJ	11	
NO SYMBOL	RAIN BIRD - TS-025, UNIVERSAL 1/4" TUBING STAKE. ONE STAKE REQUIRED PER EMITTER.					JJ	11	
NOTE: PLACE EMITTERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF VINE TYPICAL.								
NOTE: EACH SYMBOL REPRESENTS TWO (2) EMITTERS PER VINE.								
NOTE: ALL POLYETHYLENE TUBING SHALL BE INSTALLED ON GRADE AND ANCHORED WITH RAIN BIRD 6" GALVANIZED WIRE STAKES, MODEL TDS-050 BEND, INSTALLED AT EACH EMITTER AND @ FIVE (5) FEET ON CENTER.								

ESTIMATED TOTAL WATER USE (ETWU) WORKSHEET								
	Line	Hydrozone Numbers (1-6 Below - use as many tables as necessary to complete all hydrozones)						necessary
DIB2 Sweetwater Parking Area		1 Shrub Dripline	2 Shrub Drip Emit.	3 Shrub Rotary	4 Shrub Rotor	5 Tree Bubbler	6 Tree Bubbler	SLA
Evapotranspiration Rate (Eto) 52.2*	1	52.2	52.2	52.2	52.2	52.2	52.2	
Conversion Factor	2	0.62						
(Line 1 x Line 2)	3	32.364						
Plant Factor (PF)** (0.2 - 0.8)	4	0.2	0.5	0.2	0.2	0.4	0.6	
Hydrozone Area (HA) - in square feet	5	7,649	192	3,710	36,910	32	62	0
(Line 4 x Line 5)	6	1529.8	96.0	742.0	7382.0	12.8	37.2	
Irrigation Efficiency (IE)***	7	0.90	0.90	0.75	0.75	0.85	0.85	
(Line 6 ÷ Line 7)	8	1699.8	106.7	989.3	9842.7	15.1	43.8	
TOTAL all Line 8 + SLA)	9	12.697						
Line 3 x Line 9 Estimated Total Water Use - ETWU (Gallons Per Year)	10	410,934						
Total		shall not exceed MAWA below						
*Eto=Evapotranspiration rate = 52.2		** PF - Plant Factor (Water Use) - from WUCOLS						
Average calculated from values in		Selected based on type of plants in hydrozones:				Spray = .60		
State Model Water Efficiency		0.8 = HW - High Water Use Plants				Rotor = .75		
Landscape Ordinance (LMWELC)		0.5 = MW - Moderate Water Use				Bubbler = .85		
- Appendix A		0.2 = LW - Low Water Use Plants				Drip & Micro Spray = .90		
		1.0 = SLA - Special Landscape Area				A different IE may be used if supported by documentation subject to approval by the City Planner		
MAXIMUM APPLIED WATER USE (MAWA) calculation:								
MAWA = (Eto) x (0.62) x [(0.42 x LA) + (0.58 x SLA)]		48,555			0		MAWA 707,145	
		Total Landscape Area			Total SLA			

Irrigation Pressure Calculation		
Meter No:		1
HGL:		836 FT
Elevation of Meter:		506 FT
Static Water Pressure PSI:		143 psi
Valve No:		23
Valve Demand		20 GPM
Maximum System Demand		70 GPM
Elevation Change P.O.C. to Highest Head:		50 FT
Losses:		
2" Water Meter		3.7 psi
2" Service line		2.5 psi
2" RP Backflow Device		12.0 psi
2" Wye Strainer		1.5 psi
2" Master Valve		2.5 psi
2" Flow Sensor		1.3 psi
Isolation Valves		2.0 psi
1-1/2" R.C.V.		3.9 psi
150 Feet of 2-1/2" Mainline CL 315		0.3 psi
1250 Feet of 3" Mainline CL 200		4.6 psi
Filling Loss 10%		3.4 psi
Laeral Line Loss 10%		4.0 psi
Loss to Highest Head		21.7 psi
Total Losses:		63 psi
Head Operating Pressure:		40 psi
Total Pressure Required:		103 psi
Static Pressure Available:		143 psi
Residual Pressure:		40 psi
Residual % of Static Pressure:		28%
Set Pressure Regulator:		113 psi

FOR IRRIGATION LEGEND AND CALCULATIONS - SEE SHEETS 2 - 3
FOR IRRIGATION PLAN - SEE SHEETS 4 - 5
FOR IRRIGATION NOTES - SEE SHEET 6
FOR IRRIGATION DETAILS - SEE SHEETS 7 - 11
FOR LANDSCAPE SPECIFICATIONS - SEE SEPARATE BOOKLET



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COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN		PRIVATE CONTRACT			
BY: _____ DATE: _____ LUKE A. CORSBIE		SHEET 3 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 15 SHEETS			
R.C.E. 72588		IRRIGATION LEGEND & CALCULATIONS DIB2 - TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978 CALIFORNIA COORDINATE INDEX 202-1779			
EXPIRES: 06-30-22					
BENCH MARK					
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"		APPROVED FOR WILLIAM P. MORGAN, COUNTY ENGINEER			
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.		ENGINEER OF WORK:			
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B		BY: _____ DATE: _____			
ELEVATION: 518.044 USFS DATUM: NAVD 1988		GRADING PERMIT NO. PDS2021-LDGRMJ-XXXXX			
DATUM: _____					

IRRIGATION CONSTRUCTION NOTES

- ① **ADJACENT IRRIGATION NOTE:**
ALL ADJACENT SYSTEMS SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION. NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEMS EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEMS AS REQUIRED. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE WITH NO PONDING, RUNOFF, OR OVER-SPRAY IN ALL AREAS. SYSTEM LAYOUT SHALL APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING AND COMMENCING WORK.
- ② **TRENCHING IN VICINITY OF EXISTING TREES**
WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

IRRIGATION VALVE CALLOUT

CONTROLLER LETTER / VALVE NUMBER	22	1.5"	VALVE SIZE
GALLONS PER MINUTE G.P.M.	16 GPM	30 PSI	OPERATING PRESSURE (P.S.I.)
HYDROZONE PLANT FACTOR	LW	D	HYDROZONE / IRRIGATION TYPE - SEE
LANDSCAPE HYDROZONE AREA	2000'	73 A.R.	HYDROZONE LEGEND (BELOW)
SQUARE FOOTAGE			APPLICATION RATE IN INCHES PER HOUR

HYDROZONE LEGEND

Hydrozone Number	Plant Factor (Water Use) - from WUCOLS	IE - Irrigation Efficiency
(1) Dripline - Low Water / Plants	Selected based on type of plants in hydrozones:	S = Spray .71
(2) Point Source - Moderate Water/Plants	VLW = 0.1 - Very Low Water Use Plants	RT = Rotary .73
(3) Rotator - Low Water / Plants	LW = 0.1 - 0.3 - Low Water Use Plants	R = Rotor .73
(4) Rotor - Low Water / Plants	MW = 0.4 - 0.6 - Moderate Water Use Plants	B = Bubbler .77
(5) Bubbler - Low Water / Trees	HW = 0.7 - 0.9 - High Water Use Plants	D = Drip .81
(6) Bubbler - Moderate Water / Trees		P = Point Source .25

EXISTING P.O.C. / WATER METER NOTES

- ① **P.O.C. NOTE #1:**
POINT OF CONNECTION SHALL BE DOWNSTREAM OF EXISTING IRRIGATION METER. VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING IRRIGATION BACKFLOW DEVICE, CONTROLLER, MASTER VALVE AND FLOW SENSOR AND TESTING FOR PROPER OPERATION. SHOULD ANY OF THESE DEVICES BE INOPERABLE OR NOT IN PLACE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAID DEVICES. CONFIRM ANY DISCREPANCIES WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING AND COMMENCING WORK.

(EXISTING) DOMESTIC WATER METER INFORMATION

ADDRESS: SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978	WATER PURVEYOR: OTAY WATER DISTRICT PH.# 619-670-2701
METER SIZE	2"
STATIC PRESSURE	145 PSI.
SYSTEM DESIGN PRESSURE	103 PSI.
MAXIMUM SYSTEM DEMAND	70 GPM
PHASE 2 - PARKING AREA LANDSCAPE AREA	48,555 SQ. FT.
PHASE 1 - EXISTING LANDSCAPE AREA	137,859 SQ. FT.
TOTAL SITE COMBINED LANDSCAPE AREA	186,414 SQ. FT.

EXISTING CONTROLLER NOTES

- ② **EXISTING CONTROLLER NOTE #2:**
EXISTING CONTROLLER SHALL BE UTILIZED FOR PROPOSED VALVES WITHIN THE RENOVATED AREAS. VALVE NUMBERS SHOWN SHALL BE ADJUSTED AS REQUIRED TO UTILIZE THE AVAILABLE OPEN CONTROLLER STATIONS. CONTRACTOR SHALL VERIFY QUANTITY OF OPEN STATIONS OF EXISTING CONTROLLER PRIOR TO BIDDING AND PRIOR TO COMMENCING WORK. SHOULD SAID CONTROLLER NOT CONTAIN ADEQUATE OPEN STATIONS, CONTRACTOR SHALL PROVIDE A NEW OWNER APPROVED ET BASED WEATHER SMART CONTROLLER TO REPLACE THE EXISTING CONTROLLER. CONTRACTOR MAY UTILIZE EXISTING SPARE WIRES INSTALLED FROM PREVIOUS PHASE OF CONSTRUCTION. IF CONTRACTOR IS UNABLE TO LOCATE SPARE WIRES CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING OF NEW IRRIGATION CONTROL WIRES TO EXISTING CONTROLLER LOCATION AND MAKING ALL NECESSARY CONNECTIONS FOR PROPER OPERATION. VERIFY ALL CONDITIONS AND LAYOUT IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

IRRIGATION PIPE AND EQUIPMENT LOCATION NOTES

1. ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE THAT ARE SHOWN IN PAVING IS FOR DRAWING CLARITY ONLY. ALL EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE.
2. MAINLINE AND VALVE LOCATIONS SHOWN ON THIS DRAWING ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL IRRIGATION PIPE / APPURTENANCE LOCATION FOR REVIEW AND APPROVAL. FINAL LOCATION AND EXACT POSITIONING OF ALL IRRIGATION SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. MINOR MODIFICATIONS OF ALL IRRIGATION APPURTENANCE AS REQUESTED BY THE OWNER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. FAILURE TO OBTAIN OWNER'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE OWNER DIRECTED REVISION AT NO CHARGE. ALL PIPING AND WIRES SHALL BE SLEEVED UNDER PAVING, HARDSCAPE, ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.

EXISTING METER AND R/P
BACKFLOW DEVICE LOCATION.
SEE P.O.C. NOTE #1 ABOVE.

EXISTING CONTROLLER LOCATION.
SEE CONTROLLER NOTE #2 ABOVE.

KEYMAP

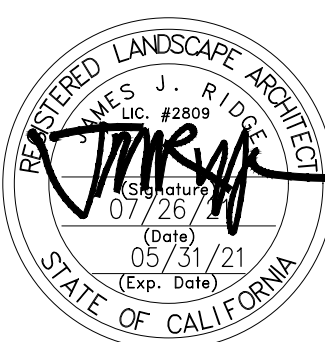
SCALE: N.T.S.

LATERAL PIPE SIZING CHART		
0 TO 5	GPM	3/4" SCH. 40 PVC PIPE
6 TO 10	GPM	1" SCH. 40 PVC PIPE
11 TO 15	GPM	1-1/4" SCH. 40 PVC PIPE
16 TO 25	GPM	1-1/2" SCH. 40 PVC PIPE
26 TO 35	GPM	2" SCH. 40 PVC PIPE
36 TO 50	GPM	2-1/2" SCH. 40 PVC PIPE
51 TO 75	GPM	3" SCH. 40 PVC PIPE

DRIPLINE INTAKE/EXHAUST HEADER PIPE SIZING CHART	
INTAKE/EXHAUST HEADER MINIMUM SIZE OF 3/4 INCH.	
FLOW RANGE	MINIMUM SIZE OF EXHAUST HEADER
0 THROUGH 5 GPM	MINIMUM SIZE SHALL BE 3/4 INCH
6 THROUGH 10 GPM	MINIMUM SIZE SHALL BE 1 INCH
11 THROUGH 15 GPM	MINIMUM SIZE SHALL BE 1-1/4 INCH
16 THROUGH 25 GPM	MINIMUM SIZE SHALL BE 1-1/2 INCH
26 THROUGH 50 GPM	MINIMUM SIZE SHALL BE 2 INCH
NOTE: CONTRACTOR SHALL SIZE ALL DRIPLINE INTAKE/EXHAUST HEADERS PER PIPE SIZING CHART, IN NO INSTANCE SHALL PIPE SIZE EXCEED DESIGNATED GPM RANGE.	

NOTE: LANDSCAPE WILL BE AUTOMATICALLY IRRIGATED AND COMPLIANT WITH THE COUNTY'S WATER CONSERVATION IN LANDSCAPING ORDINANCE.

FOR IRRIGATION LEGEND AND CALCULATIONS - SEE SHEETS 2 - 3
FOR IRRIGATION PLAN - SEE SHEETS 4 - 5
FOR IRRIGATION NOTES - SEE SHEET 6
FOR IRRIGATION DETAILS - SEE SHEETS 7 - 11
FOR LANDSCAPE SPECIFICATIONS - SEE SEPARATE BOOKLET



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CIVIL ENGINEERING
3391 sorrento valley blvd. suite 120 san diego, ca 92121
p 858.638.7277 waremalcomb.com

COUNTY APPROVED CHANGES

NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN

BY: LUKE A. CORSBIE DATE: _____
R.C.E. 72588
EXPIRES: 06-30-22

BENCH MARK

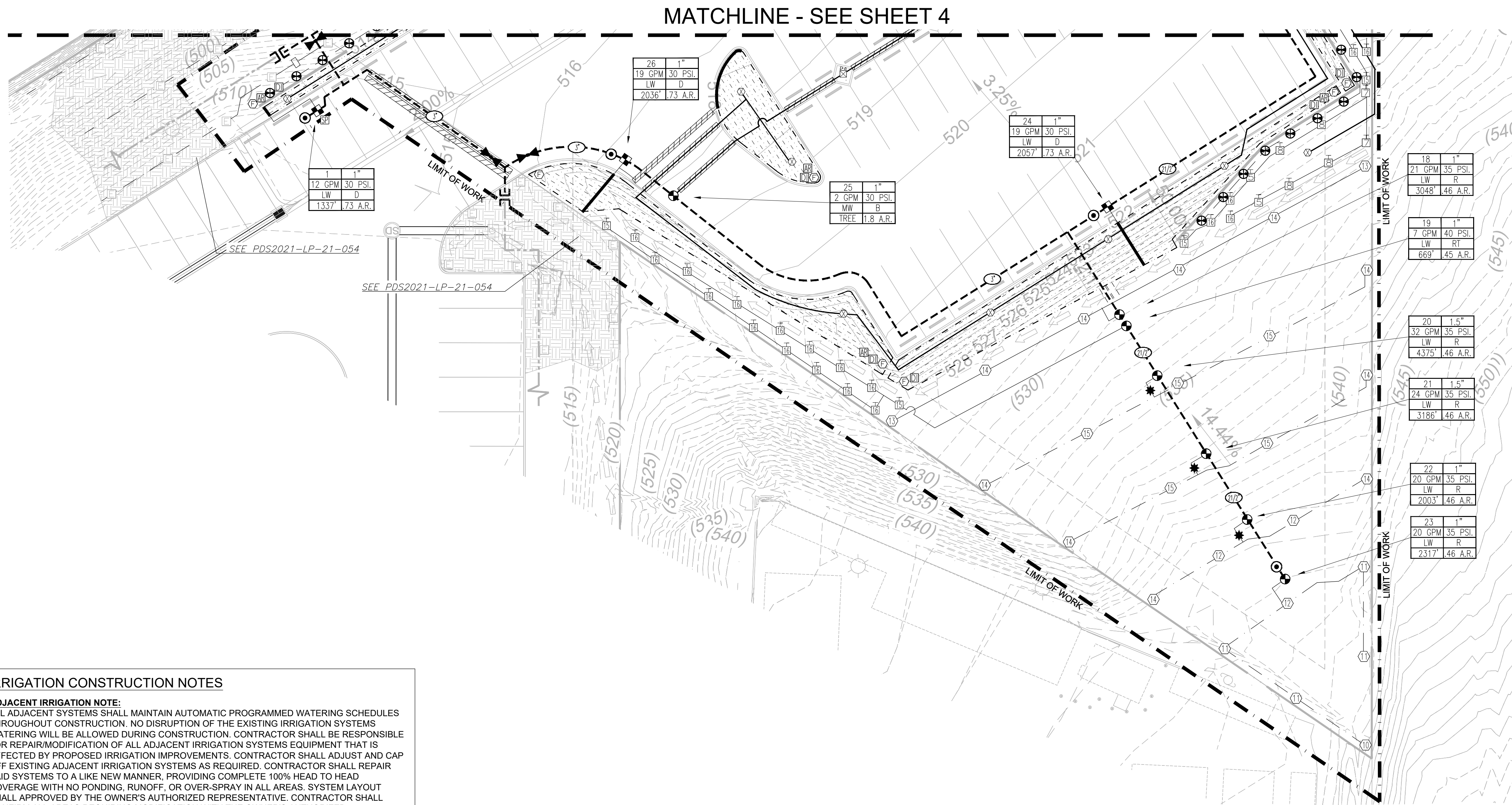
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.
RECORD FROM: SURVEY NO. 22057 AND GEIOD MODEL 12B
ELEVATION: 518.044 USFS DATUM: NAVD 1988
DATUM: _____

PRIVATE CONTRACT

SHEET 4 COUNTY OF SAN DIEGO 15 SHEETS
DEPARTMENT OF PUBLIC WORKS

IRRIGATION PLAN
DIB2-TRIANGULAR LOT
12XXX SWEETWATER SPRINGS BLVD.
SPRING VALLEY, CA 91978
CALIFORNIA COORDINATE INDEX 202-1779

APPROVED FOR WILLIAM J. MORGAN
COUNTY ENGINEER
BY: _____ DATE: _____
ENGINEER OF WORK:
R.C.E.: _____ DATE: _____
GRAPHIC PERMIT NO.
PDS2021-LDGRMJ-XXXXX



IRRIGATION PIPE AND EQUIPMENT LOCATION NOTES

- ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE THAT ARE SHOWN IN PAVING IS FOR DRAWING CLARITY ONLY. ALL EQUIPMENT SHALL BE INSTALLED WITHIN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE.
- MAINLINE AND VALVE LOCATIONS SHOWN ON THIS DRAWING ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE ALL IRRIGATION PIPE / APPURTENANCE LOCATION FOR REVIEW AND APPROVAL. FINAL LOCATION AND EXACT POSITIONING OF ALL IRRIGATION SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. MINOR MODIFICATIONS OF ALL IRRIGATION APPURTENANCE AS REQUESTED BY THE OWNER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. FAILURE TO OBTAIN OWNER'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE OWNER DIRECTED REVISION AT NO CHARGE. ALL PIPING AND WIRES SHALL BE SLEEVED UNDER PAVING, HARDSCAPE, ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.

IRRIGATION VALVE CALLOUT			
CONTROLLER LETTER / VALVE NUMBER	A2	1.5"	VALVE SIZE
GALLONS PER MINUTE G.P.M.	16 GPM	30 PSI	OPERATING PRESSURE (P.S.I.)
HYDROZONE PLANT FACTOR	LW	D	HYDROZONE / IRRIGATION TYPE - SEE HYDROZONE LEGEND (BELOW)
LANDSCAPE HYDROZONE AREA	2000'	73 A.R.	APPLICATION RATE IN INCHES PER HOUR
SQUARE FOOTAGE			

HYDROZONE LEGEND		
Hydrozone Number	Plant Factor (Water Use) - from WUCOLS Selected based on type of plants in hydrozones:	IE - Irrigation Efficiency S = Spray .71 RT = Rotary .73 R = Rotor .73 B = Bubbler .77 D = Drip .81 P = Point Source .25
(1) Dripline - Low Water / Plants	VLW = 0.1 - Very Low Water Use Plants	
(2) Point Source - Moderate Water/Plants	LW = 0.1 - 0.3 - Low Water Use Plants	
(3) Rotator - Low Water / Plants	MW = 0.4 - 0.6 - Moderate Water Use Plants	
(4) Rotor - Low Water / Plants	HW = 0.7 - 0.9 - High Water Use Plants	
(5) Bubbler - Low Water / Trees		
(6) Bubbler - Moderate Water / Trees		

- IRRIGATION CONSTRUCTION NOTES**
- ADJACENT IRRIGATION NOTE:**
ALL ADJACENT SYSTEMS SHALL MAINTAIN AUTOMATIC PROGRAMMED WATERING SCHEDULES THROUGHOUT CONSTRUCTION. NO DISRUPTION OF THE EXISTING IRRIGATION SYSTEMS WATERING WILL BE ALLOWED DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION OF ALL ADJACENT IRRIGATION SYSTEMS EQUIPMENT THAT IS AFFECTED BY PROPOSED IRRIGATION IMPROVEMENTS. CONTRACTOR SHALL ADJUST AND CAP OFF EXISTING ADJACENT IRRIGATION SYSTEMS AS REQUIRED. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING COMPLETE 100% HEAD TO HEAD COVERAGE WITH NO PONDING, RUNOFF, OR OVER-SPRAY IN ALL AREAS. SYSTEM LAYOUT SHALL APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING AND COMMENCING WORK.
 - TRENCHING IN VICINITY OF EXISTING TREES**
WHENEVER ROOTS OF EXISTING TREES ARE ENCOUNTERED DURING TRENCHING OPERATIONS, THE CONTRACTOR SHALL REROUTE MAIN LINE TRENCHES. DO NOT CUT ROOTS OVER 1" IN DIAMETER. ALL CUTS SHALL BE A CLEAN SHARP CUT. IF TRENCHING IS REQUIRED, THE CONTRACTOR SHALL HAND DIG THE TRENCHES TAKING CARE NOT TO DAMAGE ROOTS. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. PROTECT ALL ROOTS EXPOSED TO SUNLIGHT WITH MOIST BURLAP UNTIL COVERED WITH SOIL.

LATERAL PIPE SIZING CHART		
0 TO 5	GPM	3/4" SCH. 40 PVC PIPE
6 TO 10	GPM	1" SCH. 40 PVC PIPE
11 TO 15	GPM	1-1/4" SCH. 40 PVC PIPE
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NOTE: LANDSCAPE WILL BE AUTOMATICALLY IRRIGATED AND COMPLIANT WITH THE COUNTY'S WATER CONSERVATION IN LANDSCAPING ORDINANCE.

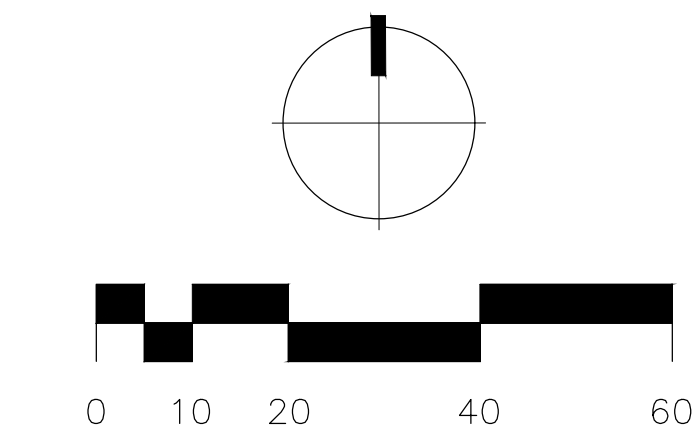
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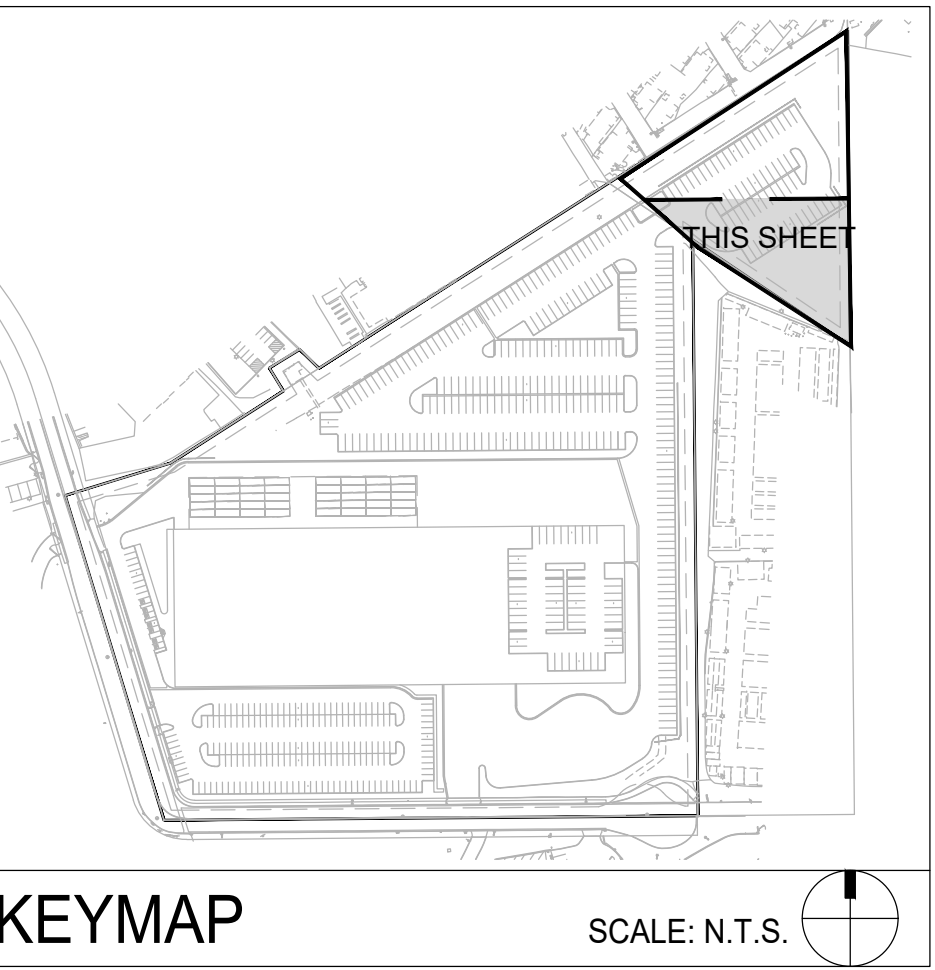


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COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE: _____
R.C.E. 72588	
EXPIRES: 06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
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PRIVATE CONTRACT		
SHEET 5	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
IRRIGATION PLAN DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER		ENGINEER OF WORK:
BY: _____	DATE: _____	R.C.E.: _____
DATE: _____		DATE: _____
GRADING PERMIT NO. PDS2021-LDGRMJ-XXXX		

Irrigation Installation Notes

1. THE CONTRACTOR SHALL OBTAIN, COORDINATE AND PAY FOR ANY AND ALL PERMITS AND ALL INSPECTIONS AS REQUIRED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY AND ALL DAMAGES TO OPERATIONS OR WORK OF OTHER CONTRACTORS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ACTIVITIES WITH ALL AGENCIES AND OTHER TRADES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY ENCROACHMENT INTO ADJACENT PROPERTY, R.O.W.'S, EASEMENTS, SETBACKS OR ANY OTHER LEGAL PROPERTY RESTRICTIONS EITHER MARKED OR UNMARKED.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR OR REPLACE, AT NO ADDITIONAL COST TO THE OWNER, ANY DAMAGE TO UNDERGROUND UTILITIES THAT MAY OCCUR.
5. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING PLANS BEFORE BEGINNING WORK.
6. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON PLANS AT THE SITE PRIOR TO COMMENCEMENT OF ANY WORK. ALL DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO PROJECT LANDSCAPE ARCHITECT FOR DIRECTION. ANY CONTINUATION OF WORK IS AT THE CONTRACTOR'S RISK AND EXPENSE.
7. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE PROJECT LANDSCAPE ARCHITECT FOR DIRECTION.
8. BEFORE ANY WORK COMMENCES, A CONFERENCE SHALL BE HELD WITH THE CITY'S PUBLIC WORKS INSPECTOR, LANDSCAPE ARCHITECT AND THE CONTRACTOR, REGARDING GENERAL REQUIREMENTS OF THIS WORK.
9. INSTALL ALL IRRIGATION COMPONENTS ACCORDING TO LOCAL CODES AND ORDINANCES.
10. THE IRRIGATION WATER METER IS TO BE PROVIDED BY THE OWNER UNLESS SHOWN OTHERWISE ON THE PLANS. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ALL IRRIGATION EQUIPMENT DOWNSTREAM OF THE POINT OF CONNECTION (P.O.C.) AT THE IRRIGATION WATER METER.
11. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
12. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS (INCLUDING EXISTING AND/OR NEW PLANT MATERIAL), GRADE DIFFERENCES OR DIFFERENCES IN THE AREA'S DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE DESIGN. SUCH OBSTRUCTIONS OR DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
13. THE WORK SHOWN ON THESE PLANS IS DIAGRAMMATIC, ALL ITEMS, I.E. CONTROLLERS, VALVES, MAINLINES, SLEEVES, WIRES, IRRIGATION HEADS, ETC. ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY. DO NOT SCALE DIMENSIONS. DETAIL DRAWINGS MAY CLARIFY LOCATIONS OF SOME ITEMS. THE CONTRACTOR SHALL NOT LOCATE ANY ITEMS WHERE IT IS OBVIOUS THAT THEY ARE IN CONFLICT WITH UNDERGROUND UTILITIES, STRUCTURES, OTHER IMPROVEMENTS, OR VEHICULAR OR PEDESTRIAN SAFETY CONSIDERATIONS.
14. CONTROLLER LOCATIONS ARE APPROXIMATE. FINAL LOCATION OF THE AUTOMATIC CONTROLLER AND THE BACKFLOW DEVICE SHALL BE APPROVED BY THE OWNER AND THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
15. ALL CONSTANT PRESSURE LINES SHALL BE TESTED FOR 3 HOURS UNDER A HYDROSTATIC PRESSURE OF 150 POUNDS PER SQUARE INCH AND BE PROVEN WATERTIGHT. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT FOR HYDROSTATIC TESTS. HYDROSTATIC TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE LANDSCAPE ARCHITECT, CITY PUBLIC WORKS INSPECTOR OR, IF APPROVED BY LANDSCAPE ARCHITECT, CONTRACTOR MAY E-MAIL DIGITAL PHOTOGRAPHS OF THE PRESSURE GAUGE TO THE LANDSCAPE ARCHITECT AT BEGINNING AND END OF TEST PERIOD.
16. 120-VOLT ELECTRICAL POWER OUTLET AT THE AUTOMATIC CONTROLLER LOCATION SHALL BE PROVIDED PER THE ELECTRICAL ENGINEER'S PLANS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ELECTRICAL SERVICE WITH THE GENERAL CONTRACTOR AND TO MAKE THE FINAL HOOK-UP FROM THE ELECTRICAL OUTLET TO THE AUTOMATIC CONTROLLER.
17. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
18. BACKFLOW DEVICE SHALL BE INSTALLED IN GROUND COVER AREA WHEREVER POSSIBLE. FINAL LOCATION SHALL BE DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE AND MAY VARY FROM THAT INDICATED ON THE DRAWINGS. QUICK COUPLER VALVES, CONTROL VALVES, AND SHUT-OFF VALVES SHALL BE INSTALLED IN GROUND COVER AREAS WHEREVER POSSIBLE.
19. PIPING AND WIRE CONDUIT PENETRATIONS THROUGH WALLS AND INSTALLATION EQUIPMENT UNDER PAVING SHALL BE INSTALLED IN SCH 40 PVC SLEEVES, AS CALLED OUT ON PLANS, OR AS PER LOCAL CODES AND MUST BE COORDINATED WITH THE GENERAL CONTRACTOR AND CONTRACTORS OF ALL VARIOUS TRADES THAT MAY BE INVOLVED TO ELIMINATE PROBLEMS THAT MAY ARISE FROM INACCESSIBILITY OR DAMAGE TO ANOTHER TRADE'S WORK. PIPING AND WIRE CONDUIT PENETRATIONS THROUGH EXISTING WALLS SHALL BE CORE DRILLED AND SLEEVED PER ABOVE, UNLESS AN EXISTING SLEEVE IS AVAILABLE FOR RE-USE WHICH WILL NOT SIGNIFICANTLY AFFECT THE SYSTEM DESIGN.
21. USE CHECK VALVES AS REQUIRED TO ELIMINATE LOW HEAD DRAINAGE.
22. THE CONTRACTOR SHALL INSTALL KBI SERIES ANTI-DRAIN VALVES ON ALL LATERALS IN AREAS WHERE SLOPE OF GRADE EXCEEDS 4:1, WHERE POST VALVE SHUT-OFF DRAINING OF THE IRRIGATION OCCURS, OR AS DIRECTED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
23. THE CONTRACTOR SHALL ONLY APPLY SUFFICIENT WATER TO PROMOTE HEALTHY GROWTH OF PLANT MATERIAL. AT NO TIME SHALL THE CONTRACTOR APPLY WATER AT A RATE OF FREQUENCY WHICH CAUSES RUNOFF OR OVER-SATURATION OF THE SOIL.
24. THE CONTRACTOR SHALL FLUSH AND ADJUST ALL IRRIGATION, DRIP AND SPRAY, FOR OPTIMUM PERFORMANCE AND TO PREVENT OVERSPRAY ONTO ADJACENT PAVING, WALLS OR OTHER HARDSCAPE ELEMENTS TO THE EXTENT POSSIBLE. THIS SHALL INCLUDE SELECTING THE BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND ADJUSTING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING FLOW FOR EACH SYSTEM.
25. WHEN RADIUS OF SPRINKLER HEADS AS REQUIRED FOR PROPER COVERAGE IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL EQUIP SPRINKLER HEAD WITH A PRESSURE COMPENSATING SCREEN (PCS) FOR LOW FLOW AND RADIUS CONTROL.
26. USE ADJUSTABLE ARC NOZZLES FOR ALL HEADS LOCATED IN AREAS WHERE A STANDARD ARC PATTERN SPRAYS OVER ONTO ADJACENT PAVING, WALLS OR OTHER HARDSCAPE ELEMENTS. ADJUSTABLE ARC NOZZLE SHOULD HAVE THE SAME RADIUS OF THROW AS THE NOZZLE BEING REPLACED.
27. NO OVERSPRAY OR LOW HEAD DRAINAGE SHALL BE ALLOWED.
28. WHEN VERTICAL OBSTRUCTIONS (LIGHT POLES, FIRE HYDRANTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
29. PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWING. NO SUBSTITUTIONS OF SMALLER PIPE SIZES SHALL BE PERMITTED, BUT SUBSTITUTIONS OF LARGER SIZES MAY BE APPROVED. ALL DAMAGED AND REJECTED PIPE SHALL BE REMOVED FROM THE SITE IMMEDIATELY UPON REJECTION.
30. ALL ELECTRICAL CONTROL WIRE SHALL BE DIRECT BURIAL, #14 UL APPROVED, IN AN 18" DEEP TRENCH, INSTALLED UNDERNEATH AND ATTACHED WITH PLASTIC TIE 10' O.C. TO THE MAINLINE PIPE WHEN RUN IN THE SAME TRENCH.
31. ALL AUTOMATIC CONTROLLER PROGRAMS MUST BE SET TO OPERATE BETWEEN THE HOURS OF 10 P.M. AND 6 A.M.
32. THE ENTIRE SPRINKLER SYSTEM SHALL BE GUARANTEED BY THE CONTRACTOR AS TO MATERIAL AND WORKMANSHIP, INCLUDING THE SETTLING OF BACKFILLED AREAS AND TRENCHES FOR A PERIOD OF ONE YEAR FOLLOWING THE DATE OF FINAL ACCEPTANCE OF THE WORK. SHOULD ANY OPERATION DIFFICULTIES IN CONNECTION WITH THE SPRINKLER SYSTEM DEVELOP WITHIN THE SPECIFIED GUARANTEE PERIOD, WHICH IN THE OPINION OF THE OWNER MAY BE DUE TO INFERIOR MATERIAL AND/OR WORKMANSHIP, SAID DIFFICULTIES SHALL BE IMMEDIATELY CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
33. THE CONTRACTOR SHALL AT ALL TIMES PROTECT HIS WORK FROM DAMAGE AND THEFT AND REPLACE ALL DAMAGED OR STOLEN PARTS AT HIS EXPENSE UNTIL THE WORK IS ACCEPTED IN WRITING BY THE OWNER.
34. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT EACH POINT OF CONNECTION. THE CONTRACTOR SHALL VERIFY WATER PRESSURE IN THE FIELD PRIOR TO CONSTRUCTION TO DETERMINE IF IT IS SUFFICIENT TO OPERATE SYSTEMS AS DESIGNED. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE PROJECT LANDSCAPE ARCHITECT. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
35. AFTER INSTALLATION OF THE IRRIGATION SYSTEM IS COMPLETED, THE CONTRACTOR SHALL PERFORM A COVERAGE AND PRESSURE TEST IN THE PRESENCE OF THE LANDSCAPE ARCHITECT AND CITY PUBLIC WORKS INSPECTOR TO DETERMINE IF THE IRRIGATION PRESSURE AND COVERAGE FOR PLANTING AREAS IS ADEQUATE AND COMPLETE. FURNISH ALL MATERIALS AND PERFORM ALL WORK REQUIRED TO CORRECT ANY INADEQUACIES OF PRESSURE AND COVERAGE DUE TO DEVIATIONS FROM THE PLANS OR BECAUSE DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS WERE NOT BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

IRRIGATION SYSTEM MAINTENANCE SCHEDULE

MAINTENANCE OF THE IRRIGATION SYSTEM IS A NECESSARY AND CONTINUING PROCESS INVOLVING MONITORING, ADJUSTMENT AND REPAIR. REPAIRS CAN BE MINIMIZED BY INSTITUTING A MAINTENANCE PROGRAM. SOME IRRIGATION SYSTEM MAINTENANCE ACTIVITIES NEED TO BE DONE AT REGULAR PERIODIC INTERVALS. OTHERS PERFORMED ON A NORMAL BASIS.

WEEKLY

- * TRIM FOLIAGE FROM AROUND SPRINKLER HEADS AS NECESSARY TO AVOID SPRAY BLOCKAGE.
- * BRIEFLY ACTIVATE EACH CONTROL VALVE AND OBSERVE SPRINKLERS FOR PROPER COVERAGE AND OPERATION AND MISALIGNED BY MOVING OPERATIONS.
- * CHECK FOR IRRIGATION OVER SPRAY OR RUNOFF AND CORRECT AS NEEDED.
- * CHECK ALL DRIP LINES FOR CLOGGED EMITTERS AND CLEAN OR REPLACE AS NEEDED.

MONTHLY

- * ADJUST PROGRAMMING OF THE AUTOMATIC IRRIGATION CONTROLLER(S) BASED ON OBSERVED FIELD CONDITIONS.
- * CHECK THE SOIL MOISTURE WITH AN AUGER AND EVALUATE WITH REGARD TO DURATION AND FREQUENCY OF THE IRRIGATION CYCLES. FINE TUNE SYSTEMS WEEKLY OR BIWEEKLY AND MAKE CORRECTIONS AS NECESSARY. KEEP RECORDS OF ALL INFORMATION. MAINTAIN PET COCKS OF VALVE IN GOOD OPERATIONAL CONDITION, PET COCKS SHALL BE ONLY "FINGER TIGHT" WHEN IN THE CLOSED POSITION.
- * CONTROLLER OPERATION: CHECK FIELD VALVES FOR SEQUENCING, TIMING, ACCURACY, AND GENERAL FUNCTION AT THE BEGINNING OF EACH WATERING SEASON.
- * WALK AND CHECK ALL ON GRADE PIPE, CHECK FOR BREAKS OR LEAKS, CHECK STAKING AND POSITION OF ALL PIPE AND SPRINKLER HEADS INSTALLED ON SLOPE.
- * FLUSH ALL DRIP SYSTEM LATERAL LINES AT EACH END OF DRIP ZONES.
- * CHECK AND CLEAN ALL DRIP REMOTE CONTROL BASKET FILTERS.

CONTINUALLY

- * CLEAN SOIL AND DEBRIS FROM SPRINKLER BODIES, NOZZLES AND DRIP SYSTEMS TO ENSURE PROPER WATER DISCHARGE.
- * STRAIGHTEN SPRINKLERS AND ADJUST NOZZLES TO INSURE PROPER WATER DISCHARGE.
- * MAINTAIN ALL SPRINKLERS IN GOOD OPERATING ORDER, INCLUDING PROPER COVERAGE ADJUSTMENTS. REPAIR OR REPLACE SPRINKLERS AS NEEDED.
- * MAINTAIN ELECTRIC CONTROL VALVE BOXES FREE OF DIRT AND DEBRIS.
- * ADJUST WATER APPLICATIONS ACCORDING TO CHANGES IN THE WEATHER. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE RESULTING FROM EITHER OVER OR UNDER-WATERING.

AS NEEDED

- * EXTEND THE HEIGHT OF SPRINKLERS AS NECESSARY IN SHRUB AREAS TO AVOID INTERFERENCE FROM ADJACENT FOLIAGE.
- * THE STAFF SHALL REPAIR OR REPLACE ANY DAMAGED OR MALFUNCTIONING EQUIPMENT WITHIN ONE WEEK OF DETECTION.
- * TURN OFF CONTROLLERS TEMPORARILY DURING PERIODS OF RAINFALL.

EQUIPMENT REPLACEMENT

- * REPLACE ANY IRRIGATION VALVES, SPRINKLERS, DRIP LINE OR OTHER COMPONENTS WITH REPLACEMENT OF THE EXACT TYPE, GPM AND MANUFACTURE AS CALLED FOR IN THE ORIGINAL IRRIGATION PLANS.

MAJOR REPAIRS

- * WHERE CONDITIONS DEVELOP WHICH CAN NOT BE HANDLED BY ROUTINE MAINTENANCE, THEY SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER.
- * ALL DAMAGE NOT RESULTING FROM CONTRACTOR'S ACTIVITIES OR NEGLIGENCE SHOULD BE BROUGHT TO THE OWNER'S ATTENTION.
- * DURING TIMES WHEN THE WATER SUPPLY IS CUT OFF OR THE IRRIGATION SYSTEM IS OTHERWISE INOPERABLE, THE LANDSCAPE SHOULD BE CAREFULLY MONITORED FOR SIGNS OF WATER STRESS. START A HAND WATERING PROGRAM IMMEDIATELY FOR ALL STRESSED LANDSCAPES. NOTIFY OWNER IN WRITING IF THIS OCCURS.

LANDSCAPE IRRIGATION AUDIT SCHEDULE

- * LANDSCAPE IRRIGATION AUDITS SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF CALIFORNIA WATER MANAGEMENT PROGRAM AS DESCRIBED IN THE "LANDSCAPE IRRIGATION AUDITOR HANDBOOK".
- * AUDITS SHALL BE CONDUCTED BY CERTIFIED LANDSCAPE IRRIGATION AUDITOR.
- * THE FIRST LANDSCAPE IRRIGATION AUDIT SHALL BE PERFORMED PRIOR TO ACCEPTANCE AND SHALL BE REPEATED EVERY FIVE YEARS THEREAFTER.

KEEPING OF RECORDS

- * THE CONTRACTOR SHALL KEEP PERMANENT RECORDS OF ALL PERFORMED MAINTENANCE TASKS.
- * RECORD ALL WATER USAGE AND CHANGES IN THE CONTROLLER TIMING, INCLUDING OFF TIMES DURING RAINFALL.
- * RECORD ALL ACTIVITIES PERFORMED DURING THE QUARTERLY REVIEW.
- * RECORD ALL PROPOSED AND EXECUTED REPAIRS.
- * RECORD ALL TIMES WHEN THE IRRIGATION SYSTEMS ARE NOT OPERABLE.
- * RECORD ALL PERFORMED IRRIGATION AUDITS.

CONTROLLER CERTIFICATION NOTE:

1. UPON COMPLETION OF INSTALLATION, THE ENTIRE IRRIGATION CONTROLLER ASSEMBLY SHALL BE INSPECTED AND TESTED FOR PROPER CONNECTIONS AND COMPLETE AND FULL OPERATION BY THE MANUFACTURE'S AND/OR DISTRIBUTOR'S REPRESENTATIVE, INCLUDING FULL AND PROPER INTERFACE WITH FLOW SENSOR DATA INTERFACE, MASTER CONTROL VALVE, AND ANY OTHER SENSOR / CONTROL COMPONENTS. WRITTEN CERTIFICATION FROM THE MANUFACTURE'S REPRESENTATIVE, VERIFYING INSTALLATION AND OPERATION IN ACCORDANCE WITH THE MANUFACTURE'S SPECIFICATIONS, SHALL BE PROVIDED TO THE, LANDSCAPE ARCHITECT, CITY AND OWNER'S REPRESENTATIVE PRIOR TO FINAL INSPECTION.
2. CONTROLLER CERTIFICATION SHALL INCLUDE VERIFICATION FROM MANUFACTURE'S / DISTRIBUTOR'S REPRESENTATIVE THAT CONTROLLER IS FUNCTIONING PROPERLY IN "ET" MODE. THE FOLLOWING PARAMETERS SHALL BE PROGRAMMED INTO THE CONTROLLER **PRIOR** TO START OF 90 DAY MAINTENANCE PERIOD. (FOR EACH CONTROLLER VALVE STATION / CIRCUIT):
 - A. FLOW RATES ACQUIRED FOR ALL STATIONS.
 - B. STATION DESCRIPTION.
 - C. STATION GROUPS NAMES BY GROUP AND ASSIGNED TO CORRECT PROGRAM.
 - D. STATION PRIORITIES.
 - E. ALERT ACTIONS SET TO HIGH FLOW ALERT/SHUT OFF AND LOW FLOW ALERT/NO ACTION.
 - F. ALL WEATHER SETTINGS AND CENTRAL CONTROL COMMUNICATION FOR "ET" AND RAIN USE.
 - G. BUDGETS SETUP IN PROGRAMMING.
 - H. CONTRACTOR SHALL PROVIDE CONTROLLER ASSEMBLY INSTALLATION CERTIFICATION **PRIOR** TO START OF 90 DAY MAINTENANCE PERIOD.
 - I. ALL PROGRAMS SHALL BE WATERING IN THE WATER BUDGET ALLOCATED BY THE WATER DISTRICT **PRIOR** TO COMMENCEMENT OF MAINTENANCE.
3. CONTROLLER SETUP SHALL INCLUDE:

COLOR CHART NOTE:

AS A REQUIREMENT THE AUTOMATIC CONTROLLER SHALL CONSIST OF A NEATLY DRAWN 11"x17" LAMINATED IRRIGATION PLAN AND COLORED ZONE MAP LAYOUT CHART. LAYOUT CHART SHALL BE COLOR CODED INDICATING LOCATION OF ALL CONTROLS, PIPING, SLEEVES, HEADS (INCLUDING TYPE), VALVES AND CONNECTION TO WATER SERVICE.

IRRIGATION WATER AUDIT NOTE:

LANDSCAPE CONTRACTOR TO PROVIDE AN IRRIGATION AUDIT, IN COMPLIANCE WITH THE STATE OF CALIFORNIA LANDSCAPE WATER MANAGEMENT PROGRAM, SHALL BE PERFORMED BY A CERTIFIED IRRIGATION AUDITOR, OTHER THAN THE DESIGNER OR INSTALLER, PRIOR TO TURNOVER OF PROJECT AND EVERY 5 YEARS THEREAFTER. A SCHEDULE SHALL BE ESTABLISHED AND SUBMITTED TO THE CITY OF AT LEAST ONCE EVERY FIVE YEARS AS REQUIRED BY THE CITY. THE REGULAR MAINTENANCE SCHEDULE COUPLED WITH THE AUDITS SHOULD HELP TO MAINTAIN THE IRRIGATION EFFICIENCY AS INTENDED IN THE DESIGN. IRRIGATION SYSTEM SHALL BE TESTED AND MAINTAINED ON A MONTHLY BASIS BY THE MAINTENANCE STAFF.

AT A MINIMUM, AUDITS SHALL BE IN ACCORDANCE WITH THE LATEST STATE OF CALIFORNIA LANDSCAPE WATER MANAGEMENT PROGRAM AS DESCRIBED IN THE LATEST LANDSCAPE IRRIGATION AUDITOR HANDBOOK, PREPARED FOR THE CALIFORNIA DEPARTMENT OF WATER RESOURCES, WATER CONSERVATION OFFICE, THE ENTIRE DOCUMENT, WHICH IS HEREBY INCORPORATED BY REFERENCE.

THE SCHEDULE SHALL PROVIDE FOR LANDSCAPE IRRIGATION AUDITS TO BE CONDUCTED BY A QUALIFIED INDIVIDUAL, OTHER THAN THE DESIGNER OR INSTALLER, AS DETERMINED BY THE DIRECTOR AT LEAST ONCE EVERY FIVE YEARS IN ACCORDANCE WITH THE REQUIREMENTS OF THE COUNTY.

Irrigation General Notes

1. IRRIGATION PLANS ARE DESIGNED AS DIAGRAMMATIC AND APPROXIMATE. ALL IRRIGATION EQUIPMENT, SPRINKLERS AND PIPE ARE TO BE INSTALLED IN LANDSCAPED AREA. NO IRRIGATION EQUIPMENT SHALL BE LOCATED IN HARDSCAPE. THE IRRIGATION CONTRACTOR SHALL ENSURE NO OVERSPRAY ONTO HARDSCAPE, STREETS, WALLS OR ANY OTHER HARDSCAPE / STRUCTURE.
2. MAINLINE SHOWN WITHIN PAVING FOR DRAWING CLARITY ONLY, ACTUAL MAINLINE LOCATION TO BE A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.
3. WHEN VERTICAL OBSTRUCTIONS (PROPS, STREET LIGHTS, TREES, ETC.) INTERFERE WITH THE SPRAY PATTERN OF THE SPRINKLER HEADS SO AS TO PREVENT PROPER COVERAGE, THE IRRIGATION CONTRACTOR SHALL FIELD ADJUST THE SPRINKLER SYSTEM BY INSTALLING A QUARTER CIRCLE OR HALF CIRCLE SPRINKLER HEAD ON EACH SIDE OF THE OBSTRUCTION SO AS TO PROVIDE PROPER COVERAGE. ALL ADJUSTMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
4. WHEN RADIUS OF SPRINKLER HEADS, REQUIRED FOR PROPER COVERAGE, IS LESS THAN RADIUS SHOWN ON LEGEND, THE CONTRACTOR SHALL EQUIP SPRINKLER HEAD WITH A RAIN BIRD "PCS" PRESSURE COMPENSATING SCREEN FOR LOW FLOW AND RADIUS CONTROL.
5. USE ADJUSTABLE ARC NOZZLES FOR ALL HEADS LOCATED IN AREAS WHERE A STANDARD ARC PATTERN OVER SPRAYS ONTO BUILDINGS, WALLS OR PAVING. ADJUSTABLE ARC NOZZLE SHOULD HAVE THE SAME RADIUS OF THROW AS THE NOZZLE BEING REPLACED.
6. OVERHEAD IRRIGATION SHALL NOT BE PERMITTED WITHIN 24 INCHES OF ANY NON-PERMEABLE SURFACE, (PER STATE ORDINANCE AB 1881). ABSOLUTELY NO OVERSPRAY OR LOW HEAD DRAINAGE IS ALLOWED.
7. IRRIGATION SYSTEM LAYOUT HAS BEEN DESIGNED TO ACCOMMODATE SHRUB HEDGES AND TO MINIMIZE SPRAY PATTERN DISTORTION OR BLOCKAGE FROM HEDGE ROWS. CONTRACTOR SHALL INSTALL SPRINKLERS IN FRONT OF HEDGE ROWS TO AVOID ANY DISTORTION OR BLOCKAGE FROM HEDGE ROWS AND ALSO TO PROVIDE ADEQUATE COVERAGE TO ALL PLANTER AREAS INCLUDING THE HEDGE ROWS. ALL LAYOUT SHALL BE CONFIRMED IN FIELD WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WORK.
8. IRRIGATION SLEEVES SHOWN FOR MAJOR STREET AND DRIVEWAY CROSSINGS FOR CLARITY ONLY. CONTRACTOR SHALL INSTALL SLEEVING BELOW ALL PAVING, HARDSCAPE, ETC. AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE.
9. ALL PIPING AND WIRE SHALL BE SLEEVED UNDER PAVING / HARDSCAPE. ALL SLEEVES TO BE MINIMUM 2X DIAMETER OF PIPE SLEEVES. ALL MAINLINE SHALL BE ACCOMPANIED WITH A MINIMUM 2-INCH DIAMETER WIRE SLEEVE. SLEEVING TO EXTEND MINIMUM 12 INCHES BEYOND PAVING.
10. ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS ON THIS DRAWING ARE APPROXIMATE. THE LANDSCAPE CONTRACTOR SHALL STAKE OUT EACH ELECTRICAL CONTROL VALVE AND ISOLATION VALVE LOCATION FOR REVIEW AND APPROVAL BY OWNER PRIOR TO INSTALLATION OF ALL VALVES. FINAL LOCATION AND EXACT POSITIONING FOR ELECTRIC CONTROL VALVES AND ISOLATION VALVES SHALL BE DETERMINED BY THE OWNER. MINOR MODIFICATIONS OF ELECTRIC CONTROL VALVES AND ISOLATION VALVE LOCATIONS AS REQUESTED BY THE OWNER SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. FAILURE TO OBTAIN OWNER'S APPROVAL PRIOR TO THE INSTALLATION SHALL CAUSE THE CONTRACTOR TO MAKE OWNER DIRECTED REVISIONS AT NO ADDITIONAL COST TO THE OWNER. IN GENERAL, UNLESS OTHERWISE DIRECTED BY OWNER, ALL VALVES SHALL BE INSTALLED THREE FEET FROM EDGE OF HARDSCAPE, WALK OR CURB IN SHRUB PLANTING AREAS.

FOR IRRIGATION LEGEND AND CALCULATIONS - SEE SHEETS 2 - 3
FOR IRRIGATION PLAN - SEE SHEETS 4 - 5
FOR IRRIGATION DETAILS - SEE SHEETS 7 - 11
FOR LANDSCAPE SPECIFICATIONS - SEE SEPARATE BOOKLET

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: _____	DATE: _____
LUKE A. CORSBIE	
R.C.E. 72588	
EXPIRES: 06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USFS DATUM: NAVD 1988	
DATUM: _____	

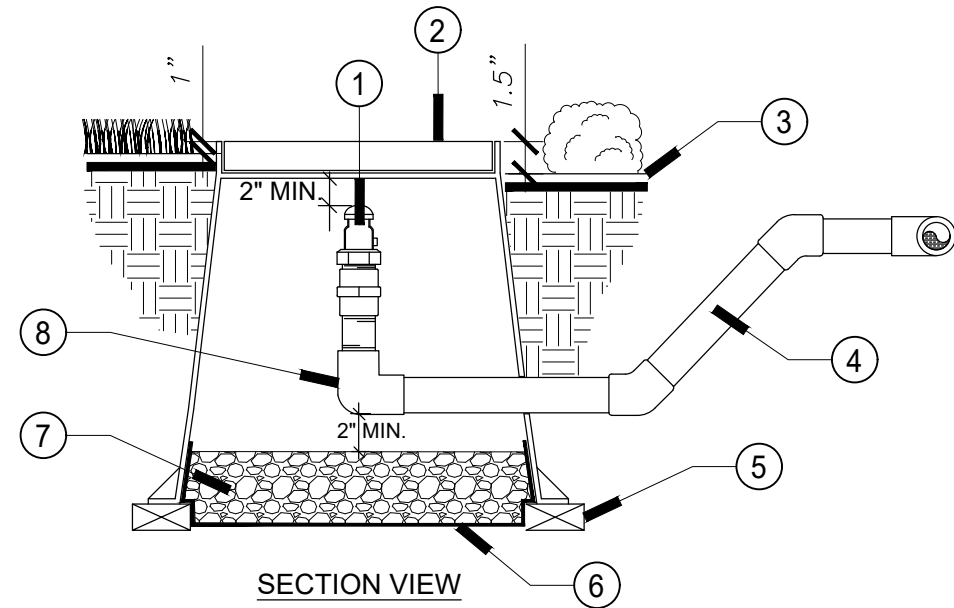
PRIVATE CONTRACT		
SHEET 6	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
IRRIGATION NOTES DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER	ENGINEER OF WORK:	
BY: _____	R.C.E.: _____	
DATE: _____	DATE: _____	
DRAWING PERMIT NO. PDS2021-LDGRMJ-XXXXX		



8841 RESEARCH DR
SUITE 200
IRVINE - CA 92618
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RIDGELA.COM



WARE MALCOMB
CIVIL ENGINEERING
3391 sorrento valley blvd. suite 120 san diego, ca 92121
p 858.638.7277 waremalcomb.com

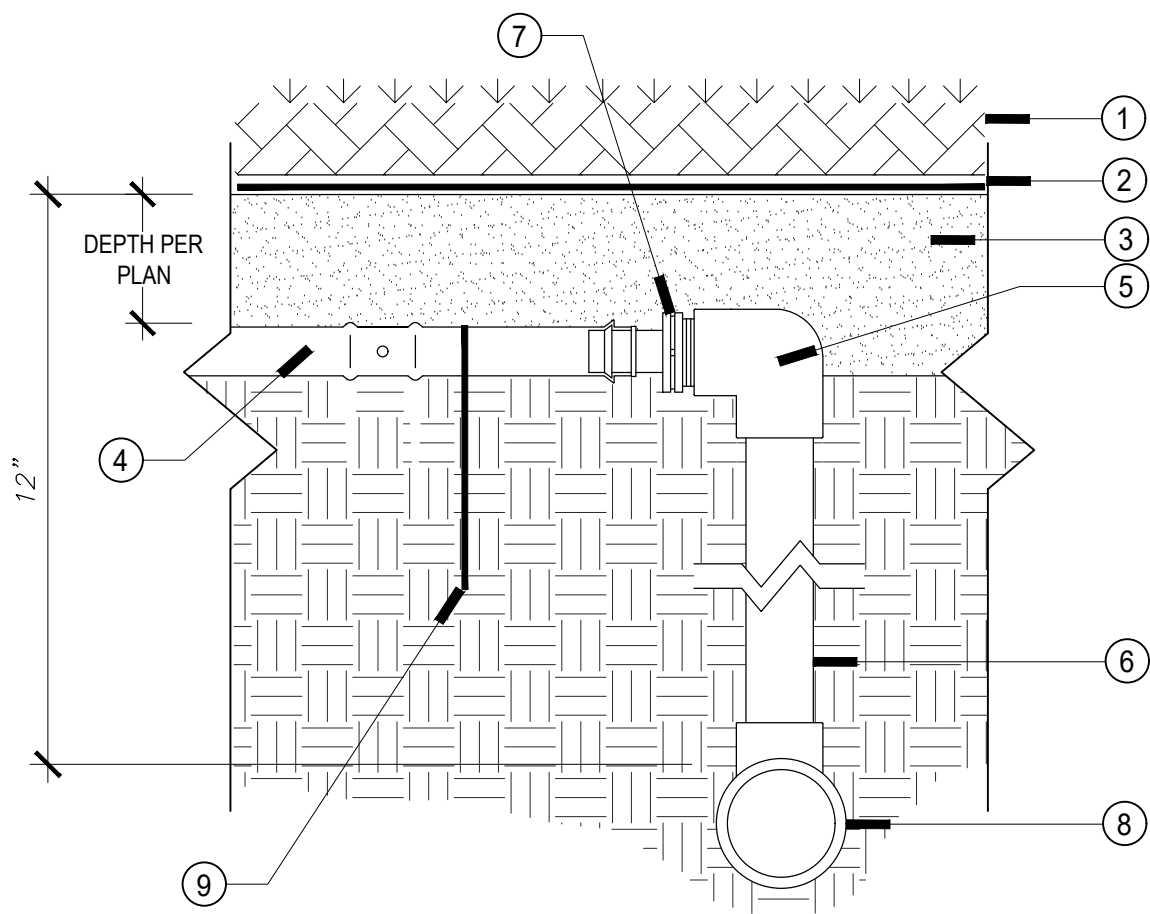


LEGEND:

1. DRIP SYSTEM AIR RELEASE VALVE, SEE LEGEND FOR TYPE. INSTALLED ON SCH. 40 PVC THREADED COUPLING WITH A 3/4" SCH. 80 NIPPLE, LENGTH AS REQUIRED TO LOCATE VALVE 2" FROM TOP OF VALVE BOX.
2. 6" PLASTIC ROUND VALVE BOX, HEAT BRAND "ARV" ONTO LID.
3. FINISHED GRADE.
4. PVC PIPE FROM DISCHARGE HEADER, LENGTH AS REQUIRED.
5. NOMINAL SIZE SOLID BRICK SUPPORTS (3 REQUIRED - EQUALLY SPACED).
6. LANDSCAPE FABRIC.
7. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.
8. PVC SCH 40 ELBOW (SxT) OR TEE, 3/4" SIZE.

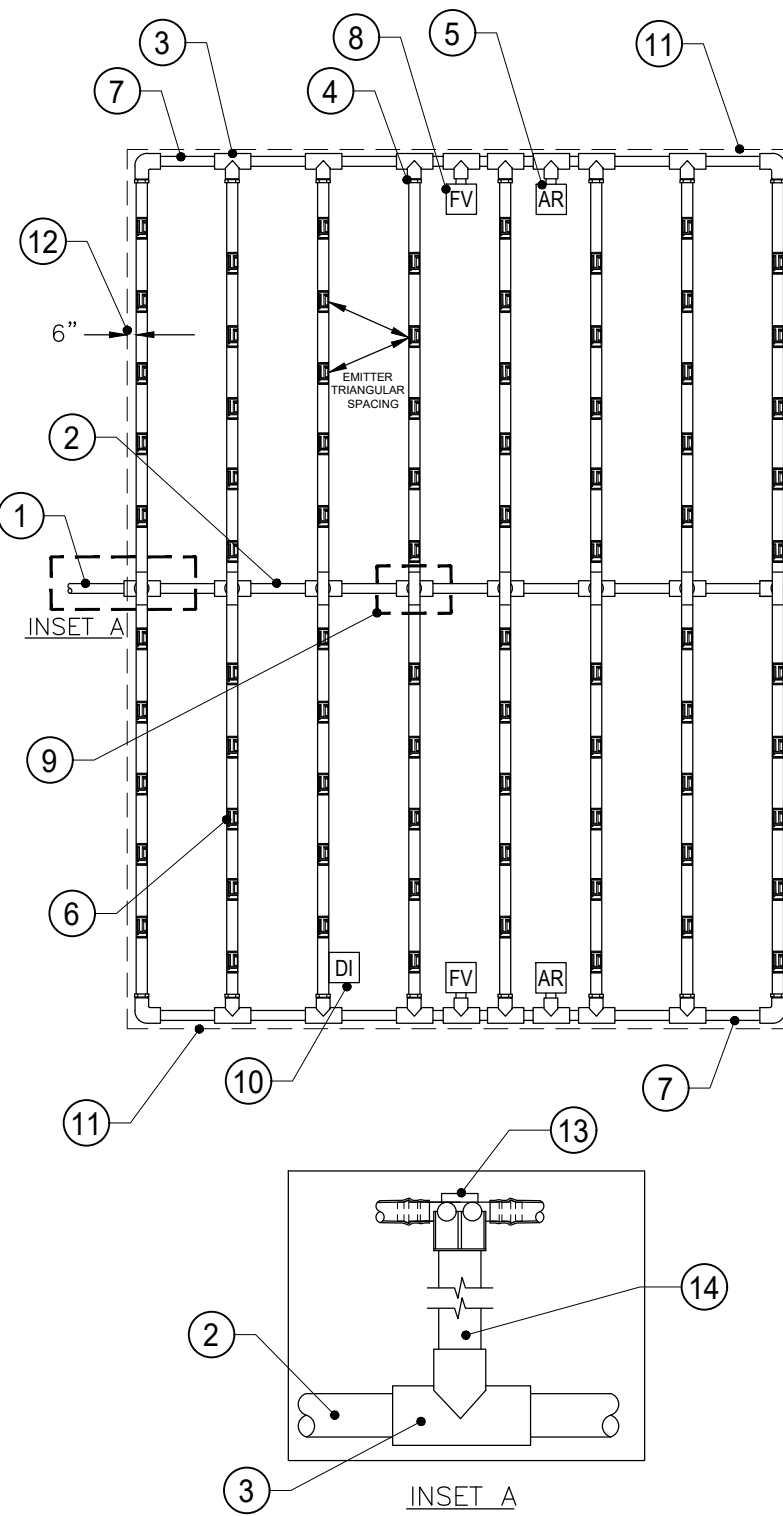
NOTES:

- A. USE SCH 40 PVC 45 DEGREE ELLS TO TRANSITION TO DRIPLINE HEADER DEPTH.
- B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER / SHRUB AREAS.
- C. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
- D. INSTALL AIR RELIEF VALVE 18" FROM PAVING.



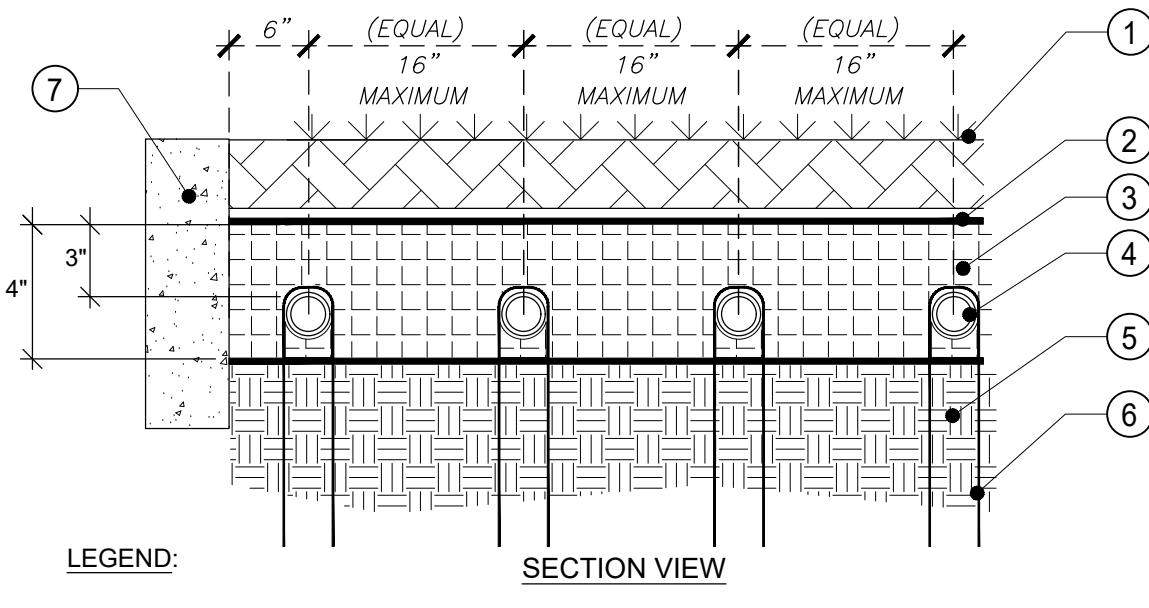
LEGEND:

1. BARK MULCH FOR SHRUB AREA PLANTING, SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL.
4. DRIPLINE TUBING - SEE LEGEND FOR TYPE.
5. SCH 40 PVC ELL FOR END FEED, TEE FOR CENTER FEED.
6. PVC PIPE RISER - SIZE AND LENGTH AS REQUIRED - SEE LEGEND FOR TYPE.
7. DRIPLINE TUBING MPT MALE ADAPTER FITTING.
8. PVC PIPE SUPPLY HEADER, SIZE PER PLAN - SEE LEGEND FOR TYPE.
9. 6" WIRE STAKES MAXIMUM FIVE (5) FEET ON CENTER - SEE LEGEND FOR TYPE.



LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE KIT.
2. PVC PIPE SUPPLY MANIFOLD.
3. SCH 40 PVC TEE SxSxT OR ELL, LINE SIZE BY 1/2".
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP) ON FLAT AREAS PLACE AT END OF DRIP ZONE.
6. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER, MAXIMUM ROW SPACING 16" FOR SHRUB AREAS AND 12" FOR TIGHTLY SPACED GROUND COVER AND TURF AREAS, EMITTERS TO BE TRIANGULAR SPACING.
7. PVC PIPE FLUSH EXHAUST MANIFOLD.
8. MANUAL DRIP FLUSH VALVE, PLUMBED TO PVC PIPE AT LOW/END OF DRIP ZONE (TYP) - SEE LEGEND FOR TYPE.
9. CONNECTION FROM SUPPLY MANIFOLD TO DRIPLINE (TYPICAL) - SEE INSET "A".
10. DRIPLINE OPERATIONAL INDICATOR - SEE LEGEND FOR TYPE.
11. PLANTER AREA PERIMETER.
12. PERIMETER DRIPLINE PIPE TO BE INSTALLED 6" FROM PERIMETER OF PLANTER AREA, AND MINIMUM 12" CLEARANCE FROM BUILDING.
13. BARB X FEMALE FITTING (TYPICAL) - SEE LEGEND FOR TYPE.
14. PVC PIPE RISER, LENGTH AS REQUIRED.



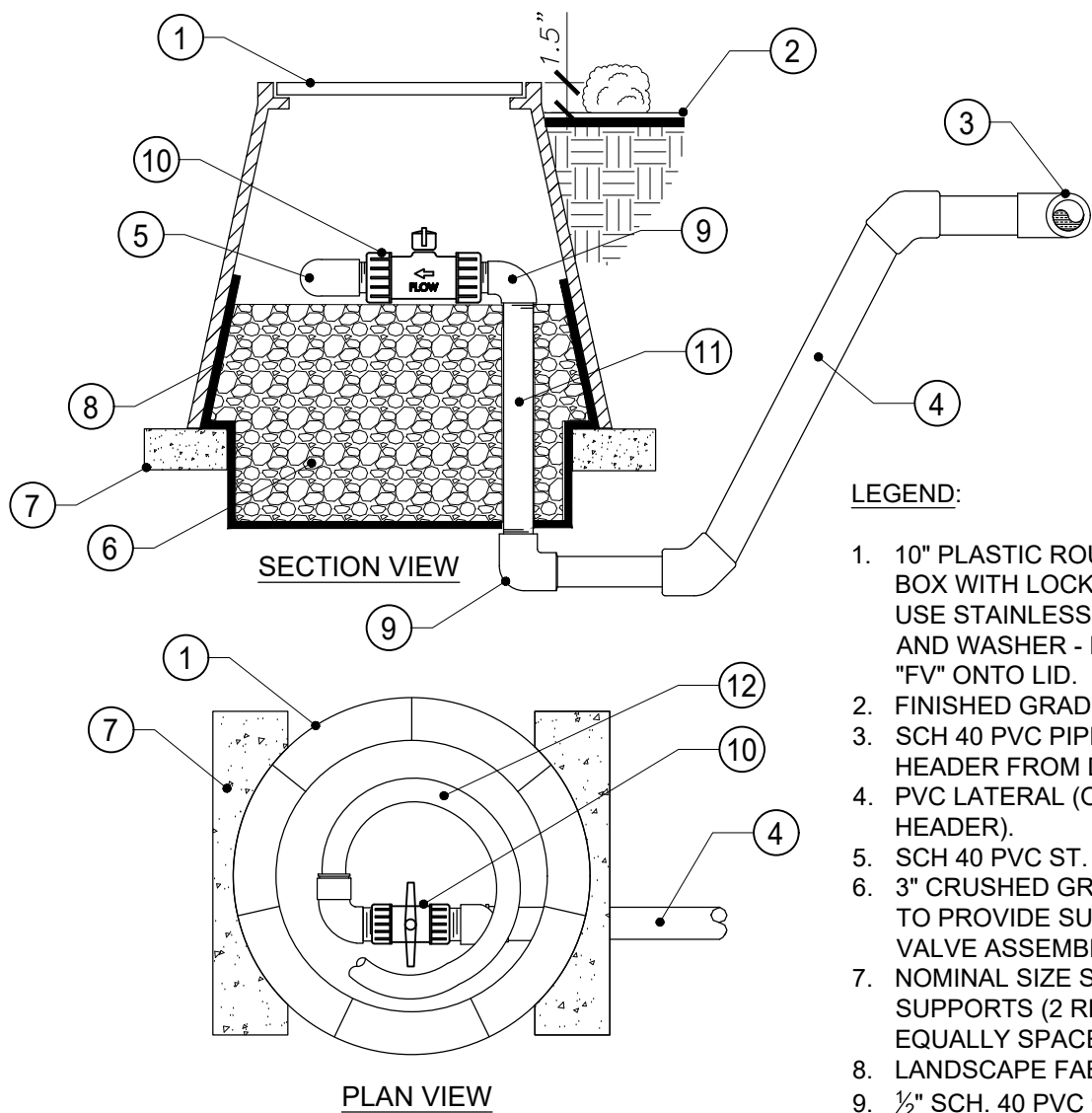
LEGEND:

1. BARK MULCH FOR SHRUB AREA PLANTING, SEE PLANTING PLAN FOR DEPTH AND TYPE.
2. FINISHED GRADE.
3. AMENDED SOIL, BRING SOIL LEVEL MINIMUM 4" BELOW FINISHED GRADE PRIOR TO DRIP TUBING INSTALLATION.
4. IN-LINE DRIP TUBING - SEE LEGEND FOR TYPE, EMITTER AND ROW SPACING.
5. AMENDED SOIL AS PER LANDSCAPE DRAWINGS.
6. 6" WIRE STAKES FIVE (5) FEET MAXIMUM SPACING ON CENTER - SEE LEGEND FOR TYPE.
7. HARDSCAPE / CURB / PAVING.

NOTES:

- A. TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO MINIMUM 4" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.
- B. INSTALL TUBING ROWS A MAXIMUM 16" ROW SPACING FOR SHRUB AREAS, AREAS OF TIGHTLY SPACED GROUND COVER AND TURF AREAS WILL REQUIRE 12" OR CLOSER ROW SPACING.
- C. SECURE TO GRADE USING 6" GALVANIZED WIRE HOOP STAKES AT MAXIMUM 5 FEET ON CENTER SPACING.
- D. BACKFILL FINAL 3" OF SOIL AFTER INSTALLATION OF TUBING.
- E. DRIPLINE TUBING SHALL BE INSTALLED WITH EMITTERS TRIANGULAR SPACED.
- F. INSTALL PERIMETER TUBING MAXIMUM 6" FROM PERIMETER EDGE FOR GROUND COVER AREAS OR AT FIRST LINE OF SHRUBS.
- G. INSTALL PARALLEL TO SLOPE AT ALL TIMES.
- H. CONTRACTOR SHALL DETERMINE MINIMUM ROW SPACING IN THE FIELD AFTER REVIEW OF PLANT SPACING FOR EACH PLANTER.
- I. EACH AND EVERY SHRUB SHALL RECEIVE WATER FROM A MINIMUM OF TWO IN-LINE EMITTERS.
- J. FOR ANY "SINGLE" OR "DOUBLE" ROW TYPE PLANTINGS, INSTALL DRIP TUBING ON BOTH SIDES OF THE SHRUB ROW TO IRRIGATE SHRUBS ON EITHER SIDE.
- K. DUE TO SOIL STRATA DIFFERENCES AND POSSIBLE COMPACTION CONTRACTOR SHALL FIELD VERIFY PRIOR TO STARTING WORK AND BEFORE BACKFILLING THAT THE FINAL LAYOUT AND ROW SPACING WILL PROVIDE ADEQUATE WATER TO ALL PLANTS.

G DRIP AIR RELIEF VALVE NOT TO SCALE



LEGEND:

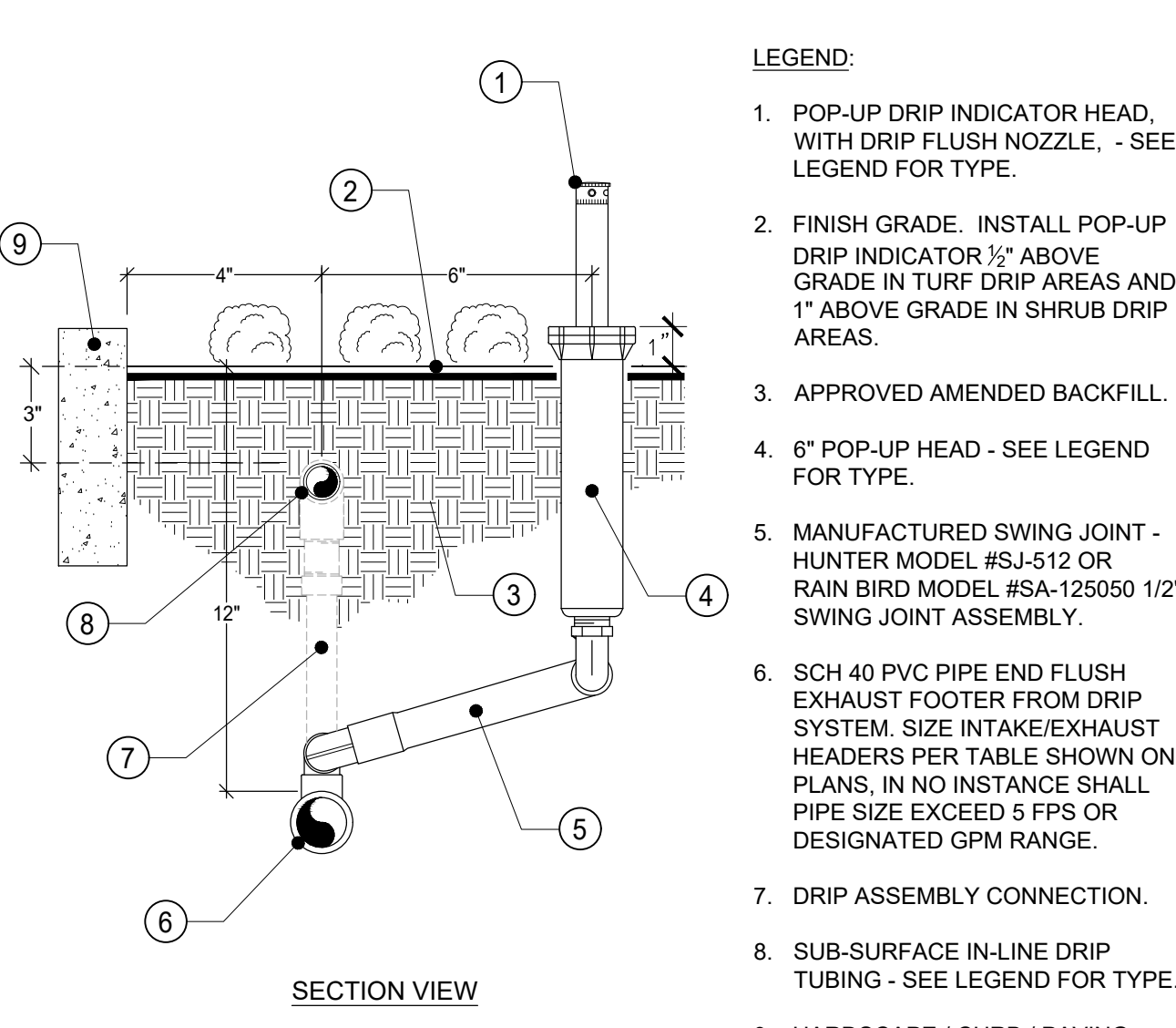
1. 10" PLASTIC ROUND VALVE BOX WITH LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER - HEAT BRAND "FV" ONTO LID.
2. FINISHED GRADE.
3. SCH 40 PVC PIPE EXHAUST HEADER FROM DRIP TUBING.
4. PVC LATERAL (OR EXHAUST HEADER).
5. SCH 40 PVC ST. ELL, Txs
6. 3" CRUSHED GRAVEL SUMP TO PROVIDE SUPPORT FOR VALVE ASSEMBLY.
7. NOMINAL SIZE SOLID BRICK SUPPORTS (2 REQUIRED - EQUALLY SPACED).
8. LANDSCAPE FABRIC.
9. 1/2" SCH. 40 PVC 90 DEGREE ELL T.X.T. (2 REQUIRED)
10. 1/2" PVC BALL VALVE - FxT TO REST ON GRAVEL SUMP.
11. SCH 80 PVC NIPPLE 12" x LENGTH AS REQUIRED.
12. 18" x 1/2" I.D. FLEX PVC HOSE - WELD INTO SOCKET OF ELL FITTING.

NOTES:

- A. USE 45 DEGREE ELLS TO TRANSITION TO DRIP SYSTEM HEADER DEPTH.
- B. SET TOP OF VALVE BOX 1-1/2" ABOVE FINISHED GRADE IN GROUND COVER / SHRUB AREAS.
- C. USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.
- D. FLUSH VALVES FOR TURF AREAS SHALL BE PLACED IN ADJACENT SHRUB PLANTER WHEN POSSIBLE, AVOID PLACING VALVES IN TURF AREAS.
- E. INSTALL FLUSH VALVE 18" FROM PAVING.
- F. INSTALL FLUSH / BALL VALVE IN THE OPEN POSITION UNTIL SYSTEM IS THOROUGHLY FLUSHED OF ANY DEBRIS.
- G. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION / COLLAPSE.

H MANUAL DRIP FLUSH VALVE NOT TO SCALE

E DRIPLINE CONNECTION NOT TO SCALE



LEGEND:

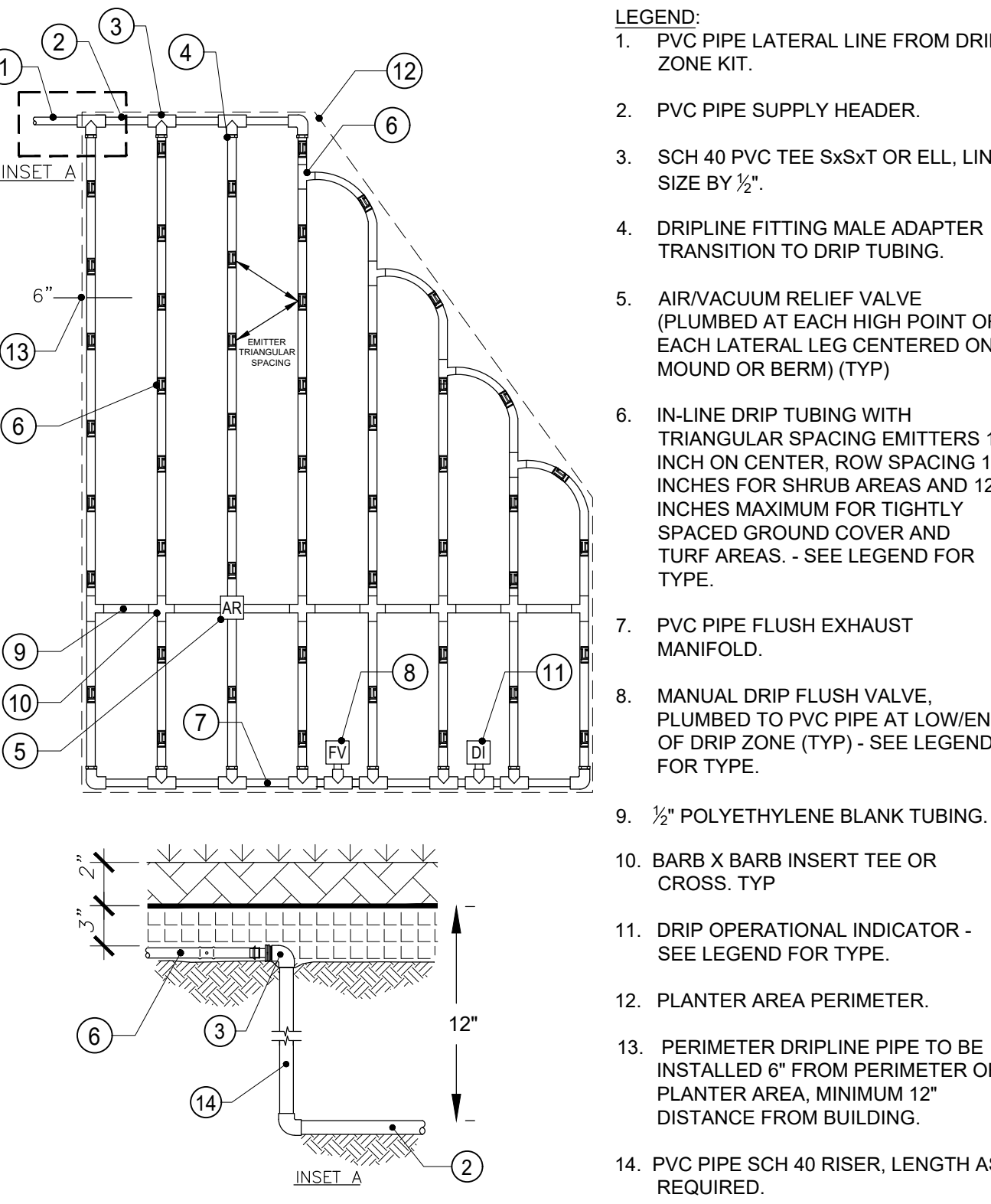
1. POP-UP DRIP INDICATOR HEAD, WITH DRIP FLUSH NOZZLE, - SEE LEGEND FOR TYPE.
2. FINISH GRADE. INSTALL POP-UP DRIP INDICATOR 1/2" ABOVE GRADE IN TURF DRIP AREAS AND 1" ABOVE GRADE IN SHRUB DRIP AREAS.
3. APPROVED AMENDED BACKFILL.
4. 6" POP-UP HEAD - SEE LEGEND FOR TYPE.
5. MANUFACTURED SWING JOINT - HUNTER MODEL #SJ-512 OR RAIN BIRD MODEL #SA-125050 1/2" SWING JOINT ASSEMBLY.
6. SCH 40 PVC PIPE END FLUSH EXHAUST FOOTER FROM DRIP SYSTEM. SIZE INTAKE/EXHAUST HEADERS PER TABLE SHOWN ON PLANS, IN NO INSTANCE SHALL PIPE SIZE EXCEED 5 FPS OR DESIGNATED GPM RANGE.
7. DRIP ASSEMBLY CONNECTION.
8. SUB-SURFACE IN-LINE DRIP TUBING - SEE LEGEND FOR TYPE.
9. HARDSCAPE / CURB / PAVING

NOTES:

- A. AFTER COMPLETE SYSTEM FLUSH, INSTALL DRIP INDICATOR NOZZLE AND ADJUST TO FULLY CLOSED POSITION.
- B. FOR POTABLE WATER INSTALL "ORANGE" COLORED FLUSH NOZZLE. FOR RECYCLED WATER INSTALL "PURPLE" COLORED FLUSH NOZZLE.
- C. INSTALL POP-UP INDICATOR HEAD 10" FROM PERIMETER OF PLANTER / HARDSCAPE.
- D. DISCHARGE EXHAUST HEADER SHALL BE INSTALLED 12" BELOW FINISHED SOIL GRADE, TYPICAL.
- E. INSTALL MINIMUM ONE(1) DRIP INDICATOR / FLUSH ASSEMBLY PER DRIP ZONE.
- F. USE TEFLON TAPE ON THREADED FITTINGS, TYPICAL. (NO LIQUID TEFLON)

F DRIP SYSTEM POP-UP INDICATOR / COMBINATION FLUSH VALVE NOT TO SCALE

C DRIPLINE LAYOUT (TYP) NOT TO SCALE

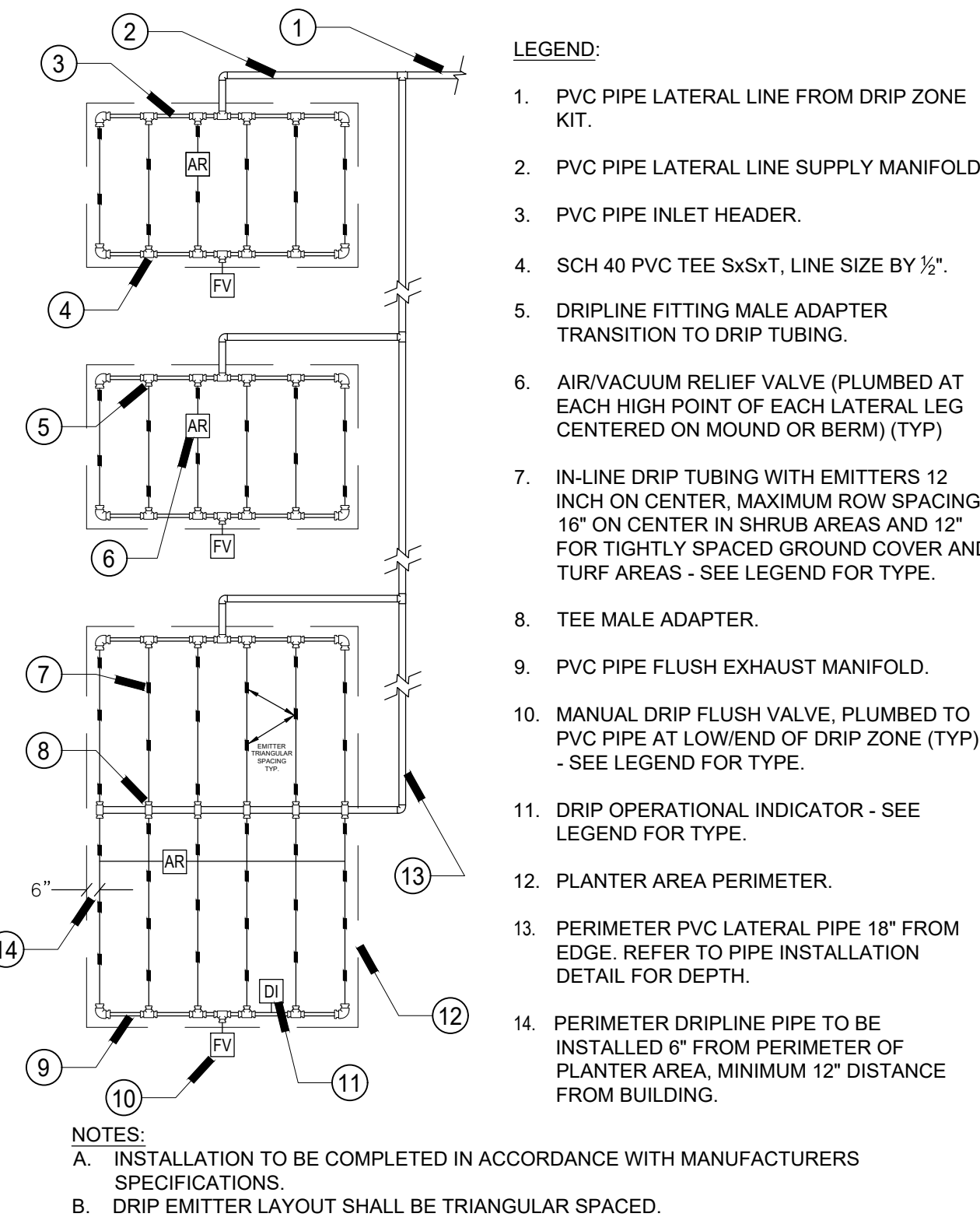


LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE KIT.
2. PVC PIPE SUPPLY HEADER.
3. SCH 40 PVC TEE SxSxT OR ELL, LINE SIZE BY 1/2".
4. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
5. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)
6. IN-LINE DRIP TUBING WITH TRIANGULAR SPACING EMITTERS 12 INCH ON CENTER, ROW SPACING 16 INCHES FOR SHRUB AREAS AND 12 INCHES MAXIMUM FOR TIGHTLY SPACED GROUND COVER AND TURF AREAS - SEE LEGEND FOR TYPE.
7. PVC PIPE FLUSH EXHAUST MANIFOLD.
8. MANUAL DRIP FLUSH VALVE, PLUMBED TO PVC PIPE AT LOW/END OF DRIP ZONE (TYP) - SEE LEGEND FOR TYPE.
9. 1/2" POLYETHYLENE BLANK TUBING.
10. BARB X BARB INSERT TEE OR CROSS, TYP
11. DRIP OPERATIONAL INDICATOR - SEE LEGEND FOR TYPE.
12. PLANTER AREA PERIMETER.
13. PERIMETER DRIPLINE PIPE TO BE INSTALLED 6" FROM PERIMETER OF PLANTER AREA, MINIMUM 12" DISTANCE FROM BUILDING.
14. PVC PIPE SCH 40 RISER, LENGTH AS REQUIRED.

D DRIPLINE LAYOUT (TYP) NOT TO SCALE

A DRIPLINE LAYOUT (TYP) NOT TO SCALE



LEGEND:

1. PVC PIPE LATERAL LINE FROM DRIP ZONE KIT.
2. PVC PIPE LATERAL LINE SUPPLY MANIFOLD.
3. PVC PIPE INLET HEADER.
4. SCH 40 PVC TEE SxSxT, LINE SIZE BY 1/2".
5. DRIPLINE FITTING MALE ADAPTER TRANSITION TO DRIP TUBING.
6. AIR/VACUUM RELIEF VALVE (PLUMBED AT EACH HIGH POINT OF EACH LATERAL LEG CENTERED ON MOUND OR BERM) (TYP)
7. IN-LINE DRIP TUBING WITH EMITTERS 12 INCH ON CENTER, MAXIMUM ROW SPACING 16" ON CENTER IN SHRUB AREAS AND 12" FOR TIGHTLY SPACED GROUND COVER AND TURF AREAS - SEE LEGEND FOR TYPE.
8. TEE MALE ADAPTER.
9. PVC PIPE FLUSH EXHAUST MANIFOLD.
10. MANUAL DRIP FLUSH VALVE, PLUMBED TO PVC PIPE AT LOW/END OF DRIP ZONE (TYP) - SEE LEGEND FOR TYPE.
11. DRIP OPERATIONAL INDICATOR - SEE LEGEND FOR TYPE.
12. PLANTER AREA PERIMETER.
13. PERIMETER PVC LATERAL PIPE 18" FROM EDGE. REFER TO PIPE INSTALLATION DETAIL FOR DEPTH.
14. PERIMETER DRIPLINE PIPE TO BE INSTALLED 6" FROM PERIMETER OF PLANTER AREA, MINIMUM 12" DISTANCE FROM BUILDING.

NOTES:

- A. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- B. DRIP EMITTER LAYOUT SHALL BE TRIANGULAR SPACED.

B DRIPLINE LAYOUT (TYP) NOT TO SCALE



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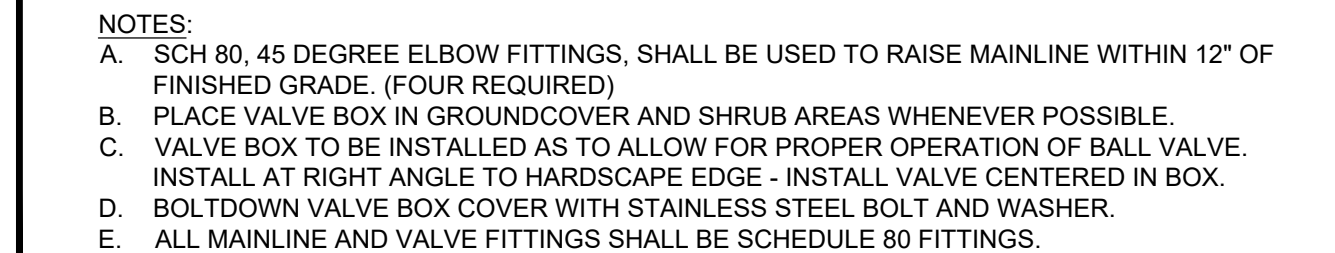
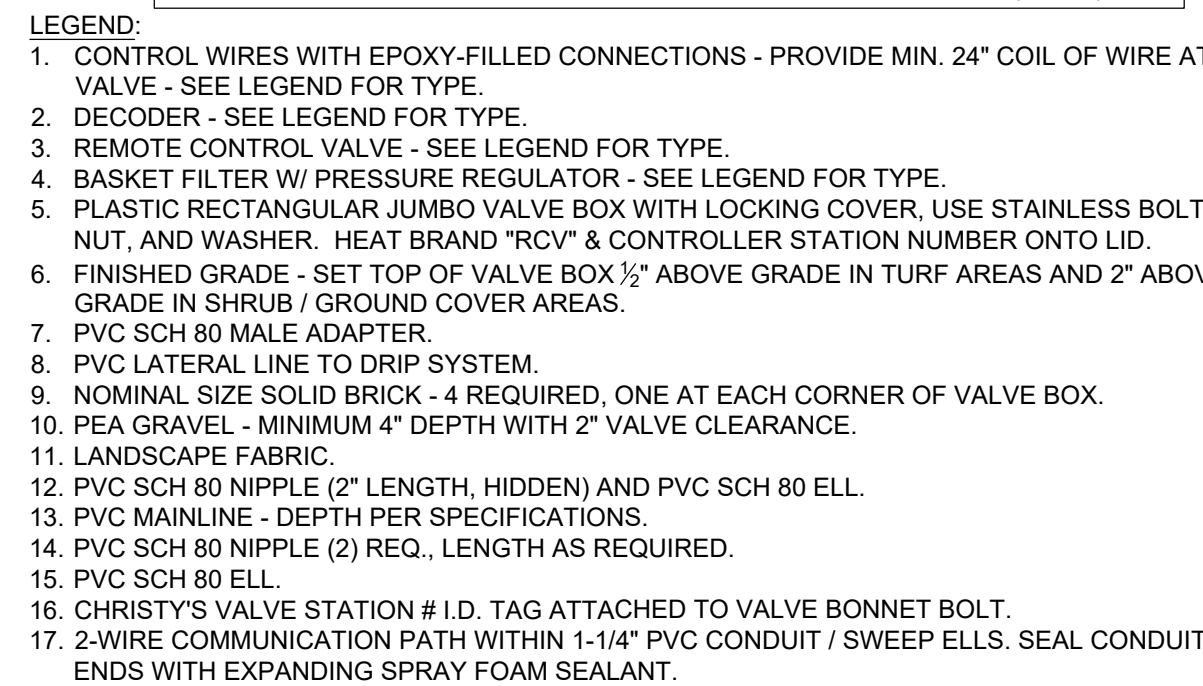


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COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE:
R.C.E. 72588	
EXPIRES: 06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USFS	DATUM: NAVD 1988

PRIVATE CONTRACT		
SHEET 7	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
IRRIGATION DETAILS DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER		ENGINEER OF WORK:
BY:	DATE:	R.C.E.:
DATE:		
DRAWING PERMIT NO. PDS2021-LDGRMJ-XXXXX		

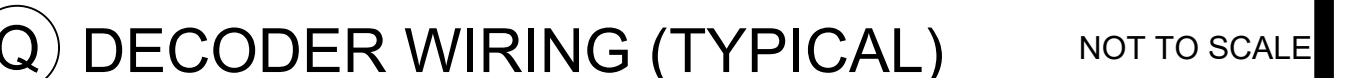


(M) BALL VALVE NOT TO SCALE

(K) ROTOR HEAD ON RISER NOT TO SCALE

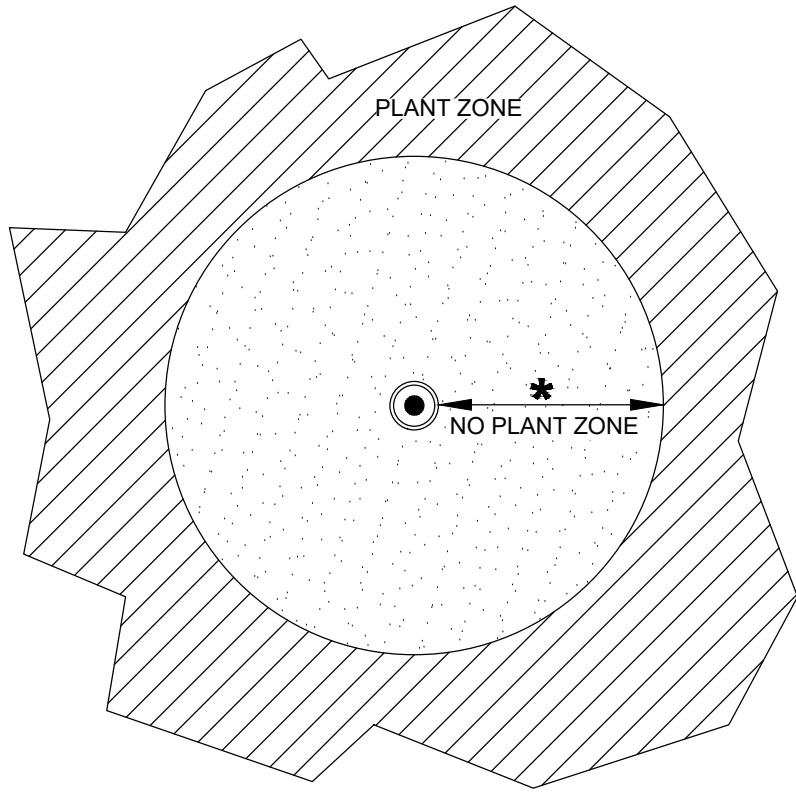
① POP-UP SPRINKLER NOT TO SCALE





COUNTY APPROVED CHANGE			
NO.	DESCRIPTION:	APPROVED BY:	DATE:





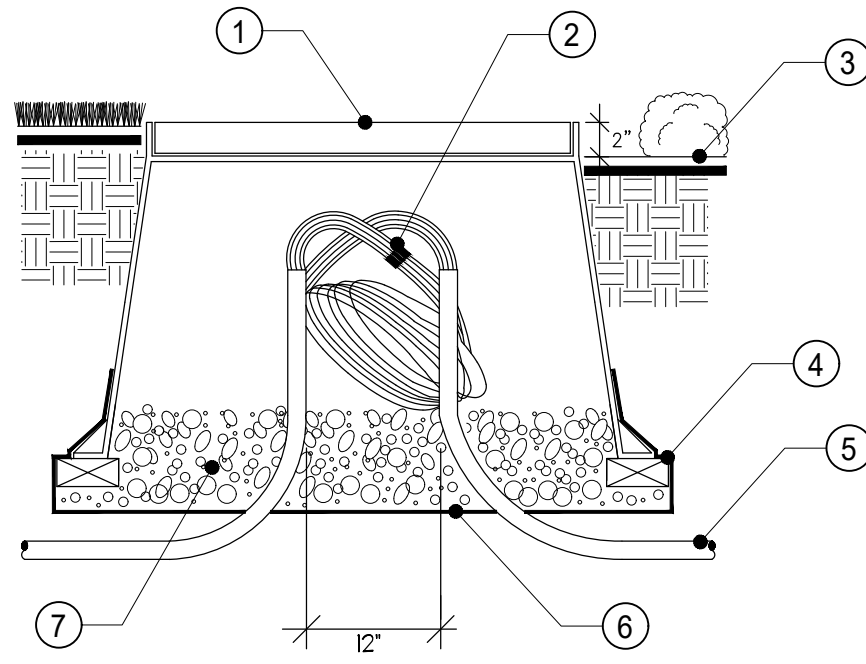
PLANT SPACING	NO PLANT ZONE
18"	9"
24"	12"
30"	15"
36"	18"
48"	24"
60"	30"
72"	36"

NOTES:

* WHEREVER POSSIBLE, THE NO PLANT ZONE SHALL BE THE AREA AROUND EACH SPRINKLER HEAD WHERE PLANTING SHALL NOT BE ALLOWED. IN GENERAL, NO PLANTING WILL BE ALLOWED WITHIN IN HALF THE DISTANCE OF THE PLANT SPACING. SEE CHART ABOVE FOR ADDITIONAL INFORMATION.

IF IT IS DETERMINED BY THE OWNER'S AUTHORIZED REPRESENTATIVE THAT THE PLANTS INSTALLED WITHIN THE NO PLANT ZONE CAUSE UNNECESSARY BLOCKAGE TO THE SPRINKLER SPRAY PATTERN, PLANTS SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

NOT TO SCALE

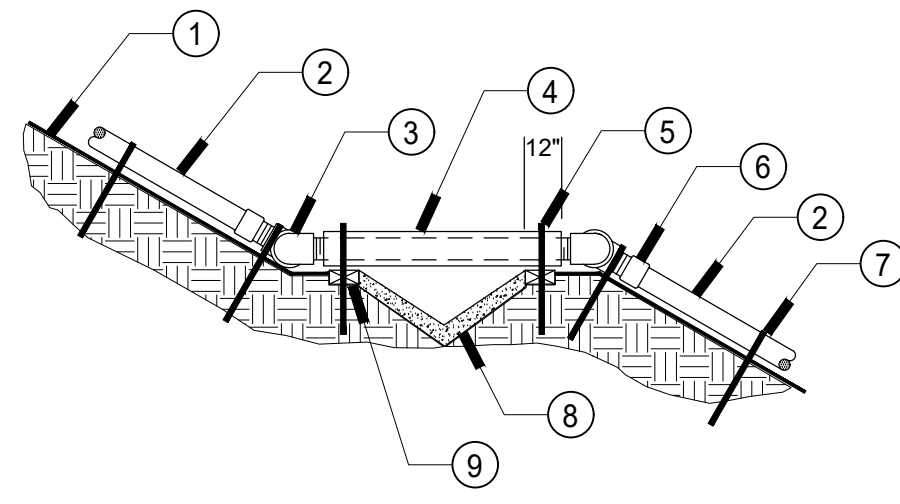


SECTION/ELEVATION N.T.S.

LEGEND:

1. BLACK PLASTIC RECTANGULAR VALVE BOX WITH LOCKING COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "PB" ONTO LID.
2. CONTROL WIRE CONNECTIONS, PRE-FILLED WITH WATER PROOF INSULATING GEL SEALANT. SEE LEGEND FOR TYPE. PROVIDE MINIMUM 36" WIRE EXPANSION COILS AT VALVE.
3. FINISHED GRADE. SET WIRE PULL BOX IN GROUND COVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF ONLY IF THERE IS NO ADJACENT GROUND COVER. SET TOP OF VALVE BOX 1/2" ABOVE FINISHED GRADE IN TURF AREAS, AND 2" IN SHRUB / GROUND COVER AREAS.
4. BRICK SUPPORTS.
5. 2-WIRE COMMUNICATION PATH WITHIN 1-1/4" PVC CONDUIT / SWEEP ELL. SEAL CONDUIT ENDS WITH EXPANDING SPRAY FOAM SEALANT.
6. LANDSCAPE FABRIC.
7. 1/2" ROUND WASHED PEA GRAVEL - MINIMUM 4" DEPTH.

NOT TO SCALE

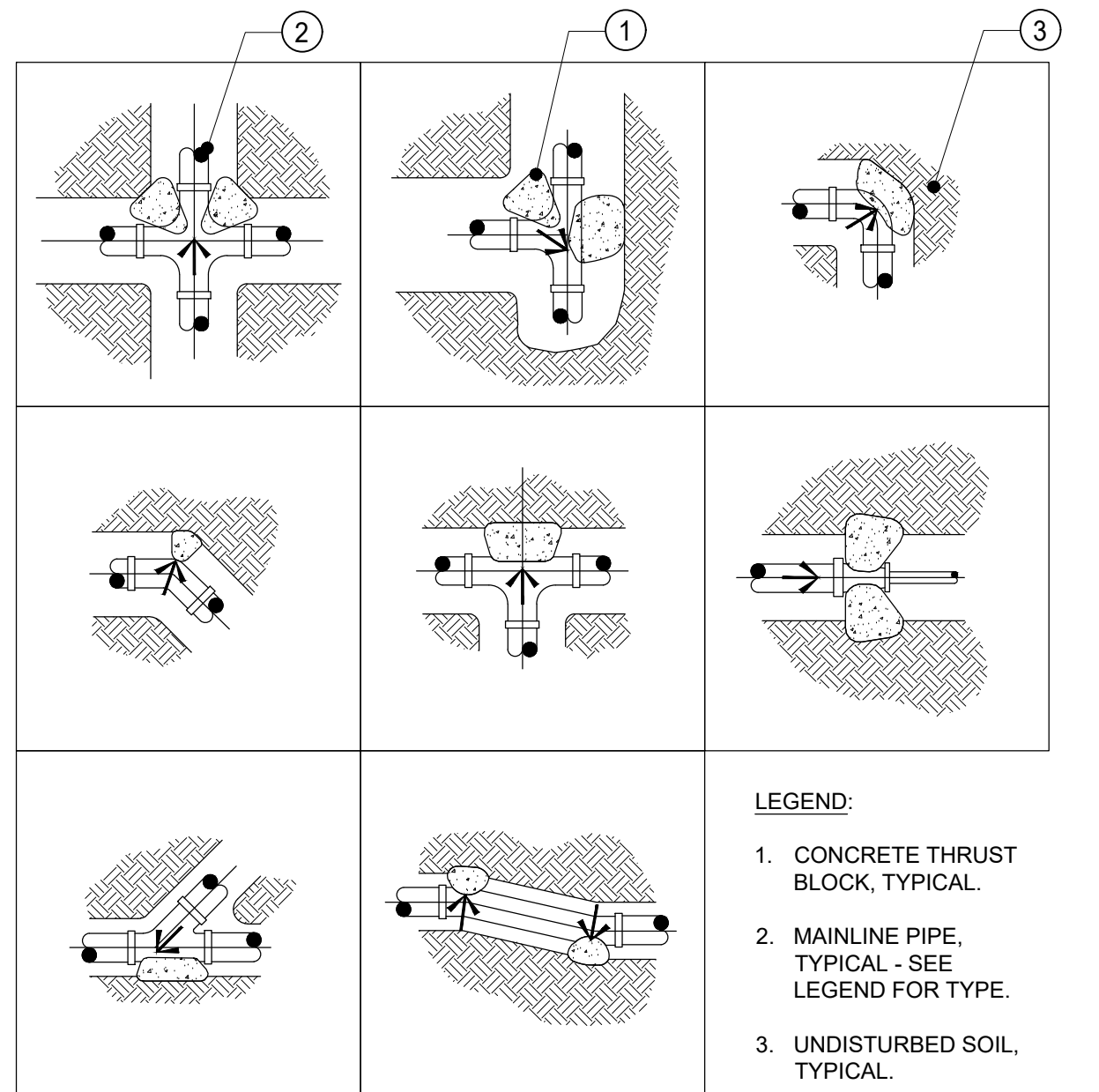


LEGEND:

1. FINISHED GRADE.
2. ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE. SEE PLANS FOR SIZE.
3. SWING JOINT.
4. SCH. 40 GALVANIZED STEEL PIPE SLEEVE.
5. SECURED GALVANIZED PIPE WITH J-HOOK STABILIZER.
6. PVC - UVR MALE ADAPTER TYPICAL BOTH SIDES.
7. #4 REBAR J-HOOK PIPE SUPPORT 7 FT ON CENTER.
8. CONCRETE TERRACE DRAIN.
9. REDWOOD BLOCKING, AS REQUIRED.

NOTES:

- A. EXTEND 12" BEYOND EDGE OF V-DITCH.
- B. SLEEVE SHALL BE MINIMUM TWICE THE DIAMETER OF THE PIPE, MINIMUM 2" SIZE.



LEGEND:

1. CONCRETE THRUST BLOCK, TYPICAL.
2. MAINLINE PIPE, TYPICAL - SEE LEGEND FOR TYPE.
3. UNDISTURBED SOIL, TYPICAL.

NOTES:

- A. ALL THRUST BLOCKS AND MAIN LINES SHALL BE INSTALLED, SIZED AND TESTED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS WHICH SHALL BE A PART OF THE INSTALLATION SPECIFICATIONS.
- B. THRUST BLOCKS TO BE MINIMUM 1 (ONE) CUBIC FEET OF CONCRETE.
- C. THRUST BLOCKS TO BE USED FOR MAINLINE PVC PIPE 2-1/2" AND LARGER.
- D. WRAP PLASTIC PIPE FITTINGS WITH 10 MILL UPC PIPE WRAP.
- E. ALL CONCRETE TO BE PORTLAND CEMENT 420-C-2000.

EE NO PLANT ZONE GUIDELINE FOR SHRUBS

CC WIRE PULL BOX

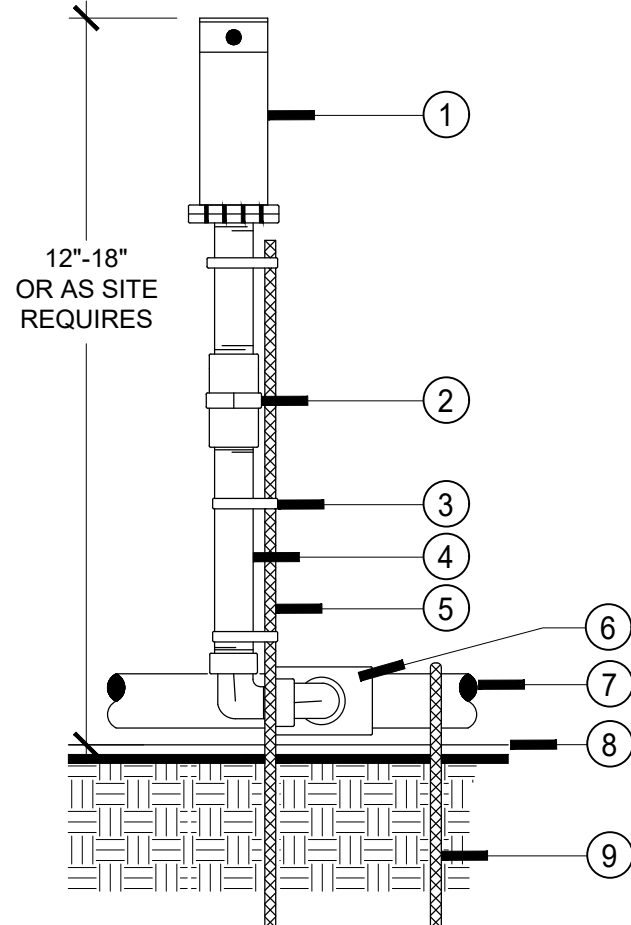
NOT TO SCALE

AA V-DITCH INSTALLATION

NOT TO SCALE

Y THRUST BLOCK

NOT TO SCALE



SECTION VIEW - NOT TO SCALE

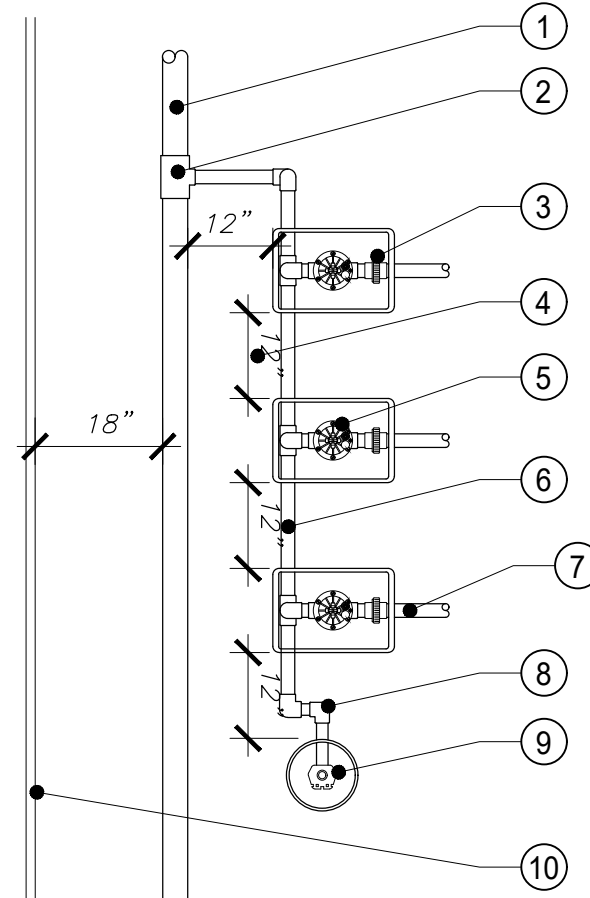
LEGEND:

1. SHRUB ADAPTER ROTOR HEAD - SEE LEGEND FOR SPECIFICATIONS.
2. SCH 40 PVC THREADED COUPLING OR SPRING-TYPE ANTI-DRAIN CHECK VALVE FOR HEADS WITH POTENTIAL OF LOW HEAD DRAINAGE.
3. VANDAL-PROOF STAINLESS STEEL CLAMP - USE IN 3 PLACES.
4. ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - LENGTH AS REQUIRED.
5. RE-BAR STAKE (2 REQUIRED) - #4 X 30" LENGTH.
6. ULTRA-VIOLET RESISTANT PVC STREET ELLS (2 REQUIRED) AND UVR PVC TEE OR ELL.
7. ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - SEE PLANS FOR SIZE.
8. FINISHED GRADE.
9. #4 X 18" RE-BAR J-HOOK, SPACED AT 8' ON CENTER, TYPICAL.

NOTES:

- A. ALL PIPE INSTALLED ON GRADE TO BE SCH 40 ULTRA-VIOLET RESISTANT PVC. SPRINKLER HEAD ASSEMBLY TO BE INSTALLED PLUMB.
- B. INSTALL SPRINKLER HEADS 12" FROM FENCES, WALLS, OR BUILDINGS.
- C. DO NOT INSTALL SPRINKLER HEAD WITHIN 36" OF PAVING, CURBS, OR TURF EDGES.
- D. INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAY TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS, OR BUILDINGS.

NOT TO SCALE



PLAN VIEW

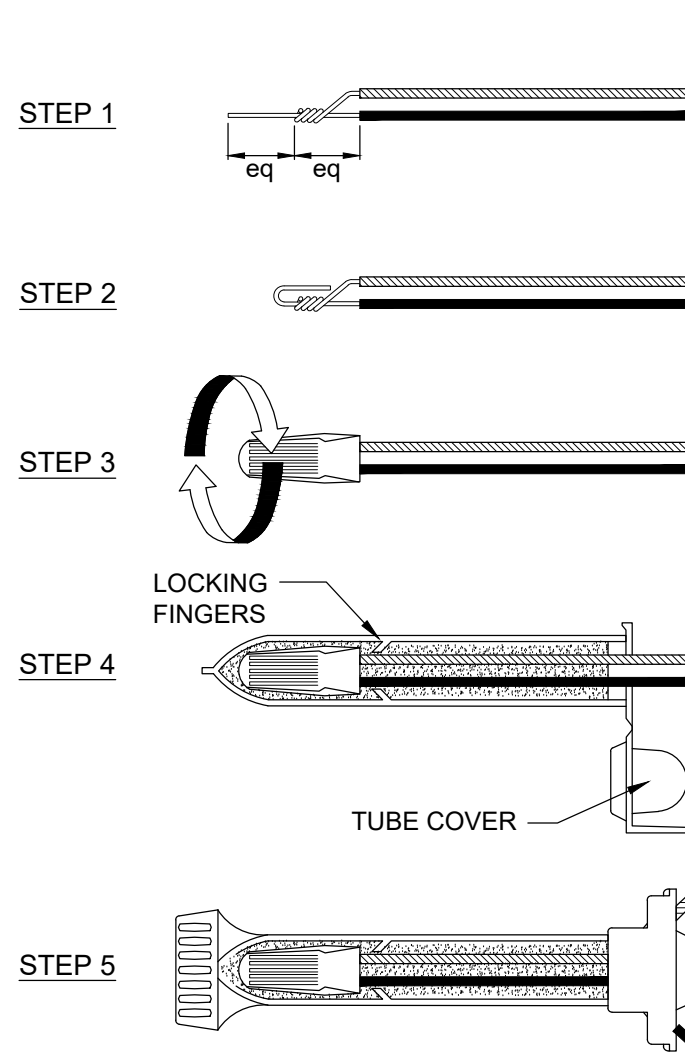
LEGEND:

1. IRRIGATION MAINLINE.
2. SCH 80 PVC TEE, SxSxT MAINLINE X MANIFOLD SIZE.
3. SCH 80 PVC UNION.
4. MINIMUM 12" SEPARATION BETWEEN ALL VALVE BOXES.
5. REMOTE CONTROL VALVE PLACED WITHIN PLASTIC RECTANGULAR VALVE BOX, TYPICAL.
6. IRRIGATION SUB-MAINLINE. SIZE PER LARGEST LATERAL LINE IN MANIFOLD.
7. LATERAL LINE TO SPRINKLERS.
8. QUICK COUPLER SWING JOINT.
9. QUICK COUPLER VALVE PLACED WITHIN A PLASTIC 10" ROUND VALVE BOX.
10. HARDSCAPE EDGE. INSTALL MAINLINE 18" OFF OF HARDSCAPE EDGE.

NOTES:

- A. CENTER VALVE BOX OVER VALVE TO FACILITATE SERVICING OF VALVE.
- B. SET VALVE BOX AND VALVE ASSEMBLY IN GROUND COVER / SHRUB AREAS WHERE POSSIBLE. INSTALL IN TURF AREAS ONLY WHEN THERE IS NO ADJACENT GROUND COVER.
- C. SET VALVE BOXES 1-1/2" MAXIMUM ABOVE GRADE IN MULCH OR GROUND COVER / SHRUB AREAS. SET 1/2" ABOVE FINISH GRADE IN TURF AREAS.
- D. SET VALVE BOXES PARALLEL TO ONE ANOTHER AND PERPENDICULAR TO EDGE.
- E. AVOID HEAVY COMPACTION OF SOIL AROUND VALVE BOXES TO PREVENT THEIR DEFORMATION / COLLAPSE.
- F. HEAT-BRAND APPROPRIATE CONTROLLER LETTER AND STATION NUMBER ONTO VALVE BOX LID.

NOT TO SCALE



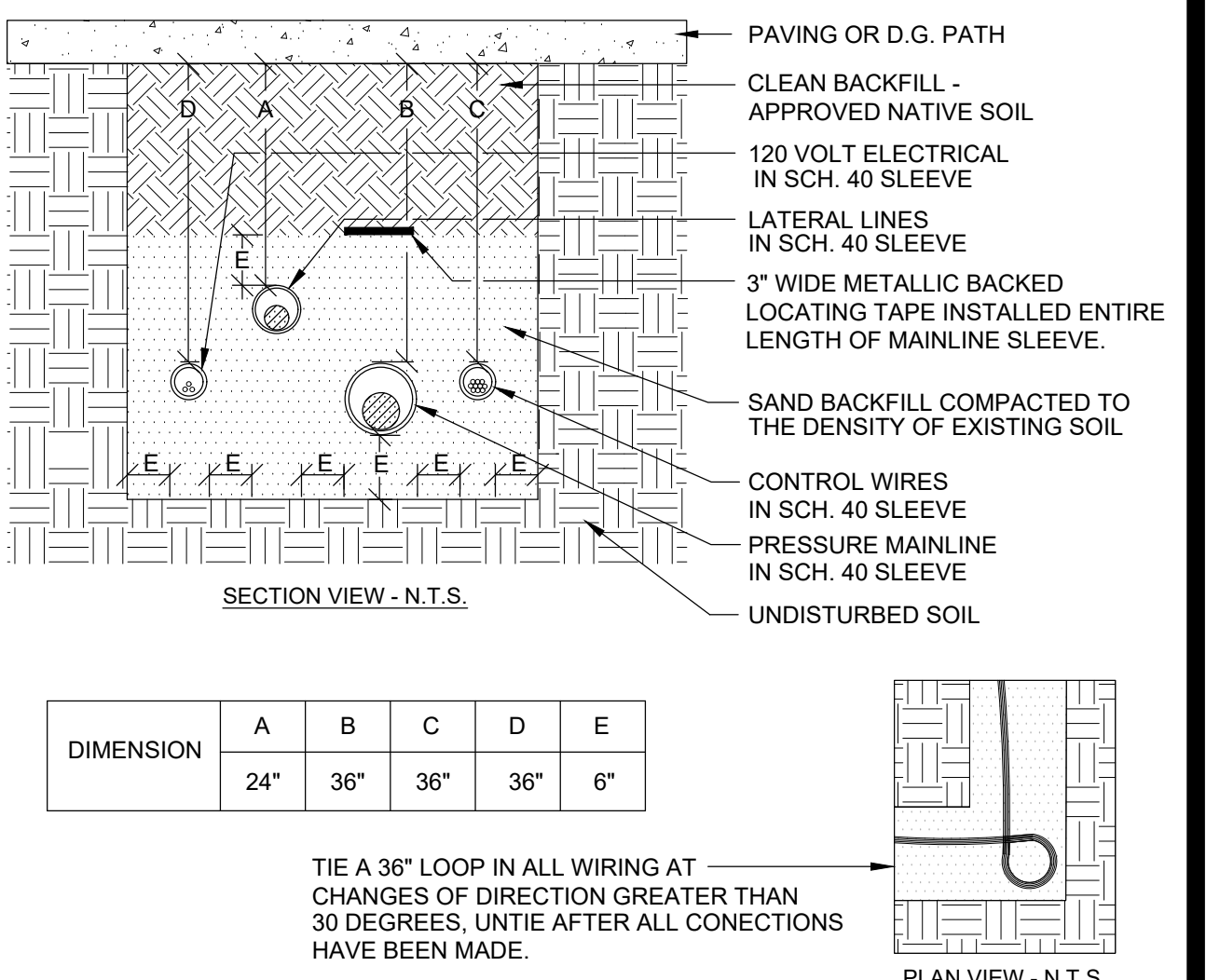
LEGEND:

1. STRIP BOTH WIRES, TWIST STRAND AROUND RIGID STRAND CLOCKWISE DIRECTION OVER HALF THE LENGTH OF STRIPPED WIRES.
2. FOLD THE OTHER HALF OF THE RIGID STRAND OVER TWISTED STRAND AS SHOWN.
3. INSERT THE TWISTED SPICE INTO THE "Y" ELECTRICAL SPRING CONNECTION AND TWIST OVER WIRE STRANDS IN A CLOCKWISE DIRECTION.
4. INSERT THE CONNECTOR INTO THE GEL-FILLED DIRECT BURY SPICE KIT. PUSH PAST THE LOCKING FINGERS TO SECURE CONNECTOR INSIDE TUBE.
5. POSITION ALL THE WIRES THROUGH THE DEDICATED INSULATOR CHANNELS AND SNAP INSULATOR TUBE COVER CLOSED.

3M "DBY-6/DBR-6" WIRE CONNECTOR

NOTES:

- A. JOIN WIRES AND TWIST TOGETHER. WIRE SPLICES MUST BE TWISTED WITH WIRE TWISTING TOOL WITH A MAXIMUM OF TWO WIRES PER TWIST. PRIOR TO INSTALLING CONNECTOR, TWIST CONNECTOR ONTO WIRES TO SEAT FIRMLY. CORRECT WIRE CONNECTIONS ARE EXTREMELY IMPORTANT. REFER TO MANUFACTURE RECOMMENDATION FOR PROPER WIRE CONNECTIONS.
- B. ALL WIRE CONNECTIONS SHALL INCLUDE A WIRE NUT CONNECTOR AND A POLY TUBE PRE-FILLED WITH WATERPROOF SEALING GEL.
- C. DIRECT BURY SPICE KIT MODEL # SA 101 SHALL BE USED TO ELECTRICALLY CONNECT 2 - #14 AND/OR 1 - #18 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE MODEL # SA102, A LARGER WIRE CONNECTOR.
- D. ALL WIRE SPLICES SHALL BE PLACED WITHIN PLASTIC VALVE BOX OR WIRE PULL BOX.



SECTION VIEW - N.T.S.

NOTES:

- A. ALL PVC MAINLINE, PVC LATERAL LINES, AND CONTROL WIRES SHALL BE SLEEVED BELOW ALL HARDSCAPE ELEMENTS WITH SCH. 40 PVC, 2 TIMES THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
- B. SLEEVE LOCATIONS SHALL BE MARKED AT EACH END AT THE TIME OF INSTALLATION WITH A PAINTED SPOT ON THE BACK FACE OF THE CURB OR A "SCORE" MARK TO DESIGNATE SLEEVE LOCATION.
- C. EXACT SLEEVE LOCATION AND SIZE SHALL BE MARKED ON RECORD DRAWINGS WITH DIMENSIONING FOR IRRIATION AS-BUILT PLANS PRIOR TO BACKFILL.
- D. SLEEVE DETAIL SHALL ALSO BE USED FOR INSTALLATION OF PIPE IN ROCK SOIL.
- E. LINES MUST HAVE MINIMUM CLEARANCE OF 6" FROM EACH OTHER & 24" FROM OTHER TRADES.
- F. TIE A 24" LOOP IN ALL WIRING AT CHANGES IN DIRECTION.
- G. INSTALL EXPANDING FOAM SEALANT INSIDE PIPE ENDS.
- H. ALL SLEEVES MUST EXTEND MINIMUM 12" DISTANCE PAST CURB OR SIDEWALK.

PLAN VIEW - N.T.S.

FF ON-GRADE PIPE/ RISER INSTALLATION

DD MANIFOLD ASSEMBLIES

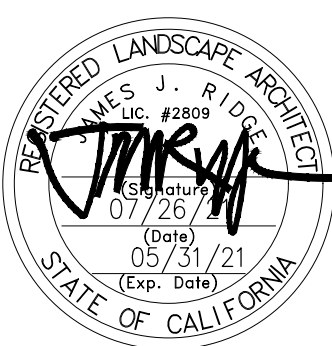
NOT TO SCALE

BB WIRE CONNECTION

NOT TO SCALE

Z SLEEVE TRENCHING

NOT TO SCALE



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COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE: _____
R.C.E. 72588	EXPIRES: 06-30-22
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEIOD MODEL 12B	
ELEVATION: 518.044 USSF DATUM: NAVD 1988	
DATUM: _____	

PRIVATE CONTRACT		
SHEET 10	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
IRRIGATION DETAILS DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER		ENGINEER OF WORK:
BY: _____	DATE: _____	R.C.E.: _____ DATE: _____
GRAPHIC PERMIT NO. PDS2021-LDGRMJ-XXXXX		

SECTION VIEW

PLAN VIEW

LEGEND:

- 4" GRATE (INCLUDED).
- FINISH GRADE.
- ROOT WATERING SYSTEM: RAIN BIRD RWS-BCG (INCLUDES, RISER, CHECK VALVE, GRATE, SWING ASSEMBLY, 1/2" MALE NPT INLET, AND BASKET CANISTER).
- BUBBLER NOZZLE.
- CHECK VALVE (INCLUDED).
- 1/2" ROUND PEA GRAVEL AND SAND SOCK (RWS-SOCK) FOR SANDY SOILS.
- FILL WITH 3/4" GRAVEL TO BOTTOM OF CHECK VALVE.
- 3/2" PVC SCH 80 NIPPLE (INCLUDED).
- 3/2" 90 DEGREE ELBOW (INCLUDED).
- 1/2" SWING ASSEMBLY (INCLUDED).
- 1/2" MALE NPT INLET (INCLUDED).
- PVC SCH 40 TEE OR ELL.
- LATERAL PIPE.
- 4" BASKET WEAVE CANISTER (INCLUDED).
- AMENDED BACKFILL.
- ROOTBALL OF TREE.

NOTE:

- TWO BUBBLERS REQUIRED PER TREE.
- PERCOLATION TEST TO BE DONE FOR DEEP WATERING, AND RESULTS RETURNED TO LANDSCAPE ARCHITECT.
- PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE, TYPICAL.
- USE TEFLON TAPE ON ALL THREADED FITTINGS, TYPICAL.

SECTION VIEW - NOT TO SCALE

LEGEND:

- SPRINKLER NOZZLE - SEE LEGEND FOR SPECIFICATIONS.
- PRESSURE REGULATING SHRUB ADAPTER - SEE LEGEND FOR SPECIFICATIONS.
- SCH 40 PVC THREADED COUPLING OR SPRING-TYPE ANTI-DRAIN CHECK VALVE FOR HEADS WITH POTENTIAL OF LOW HEAD DRAINAGE.
- #4 RE-BAR STAKE - 30" MINIMUM LENGTH.
- VANDAL-PROOF STAINLESS STEEL CLAMP - USE IN 3 PLACES.
- ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - LENGTH AS REQUIRED.
- ULTRA-VIOLET RESISTANT PVC STREET ELLS (2 REQUIRED) AND UVR PVC TEE OR ELL.
- ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - SEE PLANS FOR PIPE SIZE.
- FINISHED GRADE.
- #4 X 18" RE-BAR J-HOOK, SPACED AT 8" ON CENTER, TYPICAL.

NOTES:

- ALL PIPE INSTALLED ON GRADE TO BE SCH 40 ULTRA-VIOLET RESISTANT PVC. SPRINKLER HEAD ASSEMBLY TO BE INSTALLED PLUMB.
- INSTALL SPRINKLER HEADS 12" FROM FENCES, WALLS, OR BUILDINGS.
- DO NOT INSTALL SPRINKLER HEAD WITHIN 36" OF PAVING, CURBS, OR TURF EDGES.
- INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAY TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS, OR BUILDINGS.
- IRRIGATION HEADS WITH POTENTIAL FOR LOW HEAD DRAINAGE PROBLEMS FROM LATERAL LINES SHALL BE EQUIPPED WITH ABOVE GRADE SPRING TYPE ANTI-DRAIN VALVES.

II TREE BUBBLER DEEP ROOT WATER SYSTEM

NOT TO SCALE

SECTION VIEW

LEGEND:

- VINE. SEE PLANTING PLAN FOR TYPE.
- DIFFUSER BUG CAP. (1 REQ. PER EMITTER).
- PLASTIC TUBING STAKE. INSTALL 2" - 3" FROM BUG EMITTER.
- 1/4" POLY DISTRIBUTION TUBING. LENGTH OF TUBING EXPOSED ABOVE MULCH LAYER SHALL NOT EXCEED 6". LENGTH OF TUBING PER PLANT SHALL NOT EXCEED 5'.
- MULCH OR COBBLE COVER, PER LANDSCAPE PLANS.
- DRIP EMITTER DEVICE. (2 REQ. PER SHRUB) SEE LEGEND FOR TYPE.
- 9" WIRE STAKES FIVE (5) FEET ON CENTER.
- POLYETHYLENE INLINE DRIP TUBING. SEE LEGEND FOR TYPE.
- FINISHED GRADE.
- AMENDED SOIL, PER LANDSCAPE PLANS.

NOTES:

- INSTALL TWO EMITTERS PER VINE.
- PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE, TYPICAL.
- STAKE EMISSION POINT OVER EDGE OF ROOTBALL.
- OFFSET EMITTERS TO UP-SLOPE SIDE OF ROOTBALL IN SLOPE CONDITIONS OF 3:1 OR GREATER. DISTRIBUTION LENGTH OF EXPOSED TUBING SHALL NOT EXCEED 6 INCHES - LENGTH OF TUBING PER PLANT SHALL NOT EXCEED 5 FEET.

JJ DRIP EMITTER CONNECTION

NOT TO SCALE

SECTION VIEW

LEGEND:

- VINE. SEE PLANTING PLAN FOR TYPE.
- DIFFUSER BUG CAP. (1 REQ. PER EMITTER).
- PLASTIC TUBING STAKE. INSTALL 2" - 3" FROM BUG EMITTER.
- 1/4" POLY DISTRIBUTION TUBING. LENGTH OF TUBING EXPOSED ABOVE MULCH LAYER SHALL NOT EXCEED 6". LENGTH OF TUBING PER PLANT SHALL NOT EXCEED 5'.
- MULCH OR COBBLE COVER, PER LANDSCAPE PLANS.
- DRIP EMITTER DEVICE. (2 REQ. PER SHRUB) SEE LEGEND FOR TYPE.
- 9" WIRE STAKES FIVE (5) FEET ON CENTER.
- POLYETHYLENE INLINE DRIP TUBING. SEE LEGEND FOR TYPE.
- FINISHED GRADE.
- AMENDED SOIL, PER LANDSCAPE PLANS.

NOTES:

- INSTALL TWO EMITTERS PER VINE.
- PLACE BUBBLERS AT EDGE OF ROOTBALL ON OPPOSITE SIDES OF TREE. ADJUST PER ROOTBALL SIZE, TYPICAL.
- STAKE EMISSION POINT OVER EDGE OF ROOTBALL.
- OFFSET EMITTERS TO UP-SLOPE SIDE OF ROOTBALL IN SLOPE CONDITIONS OF 3:1 OR GREATER. DISTRIBUTION LENGTH OF EXPOSED TUBING SHALL NOT EXCEED 6 INCHES - LENGTH OF TUBING PER PLANT SHALL NOT EXCEED 5 FEET.

GG ON-GRADE PIPE/RISER INSTALLATION

NOT TO SCALE

SECTION VIEW

LEGEND:

- SPRINKLER NOZZLE - SEE LEGEND FOR SPECIFICATIONS.
- PRESSURE REGULATING SHRUB ADAPTER - SEE LEGEND FOR SPECIFICATIONS.
- SCH 40 PVC THREADED COUPLING OR SPRING-TYPE ANTI-DRAIN CHECK VALVE FOR HEADS WITH POTENTIAL OF LOW HEAD DRAINAGE.
- #4 RE-BAR STAKE - 30" MINIMUM LENGTH.
- VANDAL-PROOF STAINLESS STEEL CLAMP - USE IN 3 PLACES.
- ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - LENGTH AS REQUIRED.
- ULTRA-VIOLET RESISTANT PVC STREET ELLS (2 REQUIRED) AND UVR PVC TEE OR ELL.
- ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - SEE PLANS FOR PIPE SIZE.
- FINISHED GRADE.
- #4 X 18" RE-BAR J-HOOK, SPACED AT 8" ON CENTER, TYPICAL.

NOTES:

- ALL PIPE INSTALLED ON GRADE TO BE SCH 40 ULTRA-VIOLET RESISTANT PVC. SPRINKLER HEAD ASSEMBLY TO BE INSTALLED PLUMB.
- INSTALL SPRINKLER HEADS 12" FROM FENCES, WALLS, OR BUILDINGS.
- DO NOT INSTALL SPRINKLER HEAD WITHIN 36" OF PAVING, CURBS, OR TURF EDGES.
- INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAY TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS, OR BUILDINGS.
- IRRIGATION HEADS WITH POTENTIAL FOR LOW HEAD DRAINAGE PROBLEMS FROM LATERAL LINES SHALL BE EQUIPPED WITH ABOVE GRADE SPRING TYPE ANTI-DRAIN VALVES.

HH UVR PVC PIPE (ON-GRADE)

NOT TO SCALE

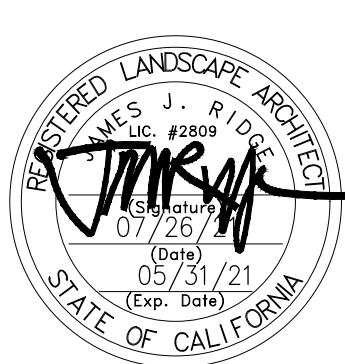
SECTION VIEW

LEGEND:

- SPRINKLER NOZZLE - SEE LEGEND FOR SPECIFICATIONS.
- PRESSURE REGULATING SHRUB ADAPTER - SEE LEGEND FOR SPECIFICATIONS.
- SCH 40 PVC THREADED COUPLING OR SPRING-TYPE ANTI-DRAIN CHECK VALVE FOR HEADS WITH POTENTIAL OF LOW HEAD DRAINAGE.
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- ULTRA-VIOLET RESISTANT SCH 40 PVC PIPE - SEE PLANS FOR PIPE SIZE.
- FINISHED GRADE.
- #4 X 18" RE-BAR J-HOOK, SPACED AT 8" ON CENTER, TYPICAL.

NOTES:

- ALL PIPE INSTALLED ON GRADE TO BE SCH 40 ULTRA-VIOLET RESISTANT PVC. SPRINKLER HEAD ASSEMBLY TO BE INSTALLED PLUMB.
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- DO NOT INSTALL SPRINKLER HEAD WITHIN 36" OF PAVING, CURBS, OR TURF EDGES.
- INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAY TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS, OR BUILDINGS.
- IRRIGATION HEADS WITH POTENTIAL FOR LOW HEAD DRAINAGE PROBLEMS FROM LATERAL LINES SHALL BE EQUIPPED WITH ABOVE GRADE SPRING TYPE ANTI-DRAIN VALVES.



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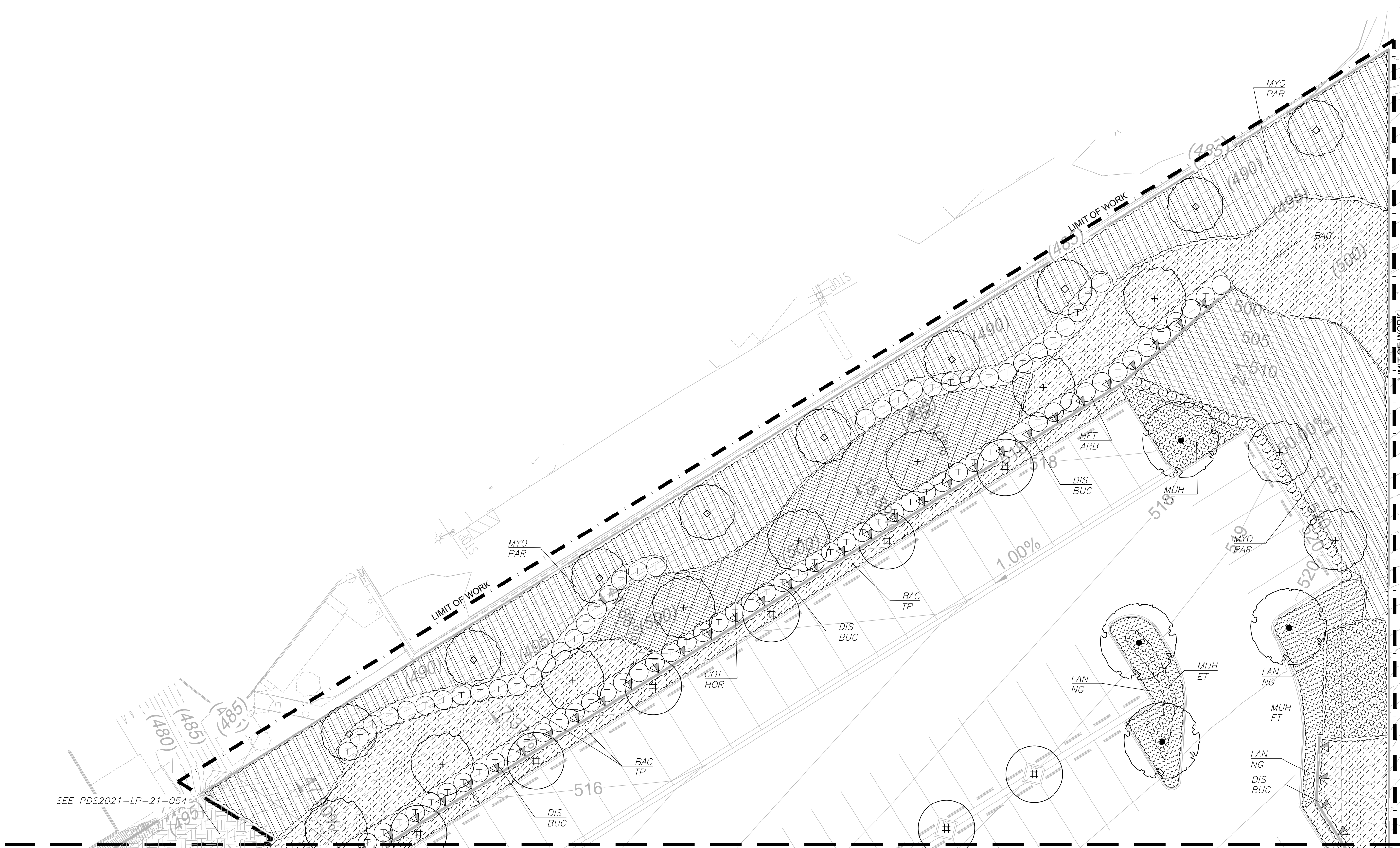
WARE MALCOMB
CIVIL ENGINEERING
3391 sorrento valley blvd. suite 120 san diego, ca 92121
p 858.638.7277 waremalcomb.com

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE: _____
R.C.E. 72588	
EXPIRES: 06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USFS	DATUM: NAVD 1988

PRIVATE CONTRACT		
SHEET 11	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
IRRIGATION DETAILS DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN, COUNTY ENGINEER		ENGINEER OF WORK:
BY: _____ DATE: _____		R.C.E.: _____ DATE: _____
GRADING PERMIT NO. PDS2021-LDGRMJ-XXXXX		

ENGINEER'S NAME: WARE MALCOMB
PHONE NO. (858)638-7277 // EMAIL: waremalcomb.com



MATCHLINE - SEE SHEET 13

NOTE: LANDSCAPE WILL BE AUTOMATICALLY IRRIGATED AND COMPLIANT WITH THE COUNTY'S WATER CONSERVATION IN LANDSCAPING ORDINANCE.

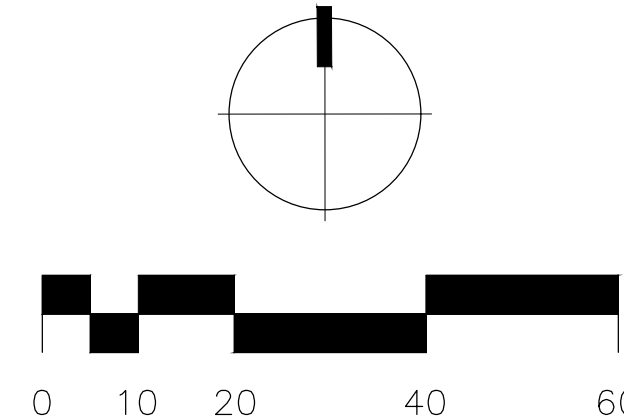
FOR PLANTING DETAILS - SEE SHEET 14
FOR LANDSCAPE SPECIFICATIONS - SEE SEPARATE BOOKLET



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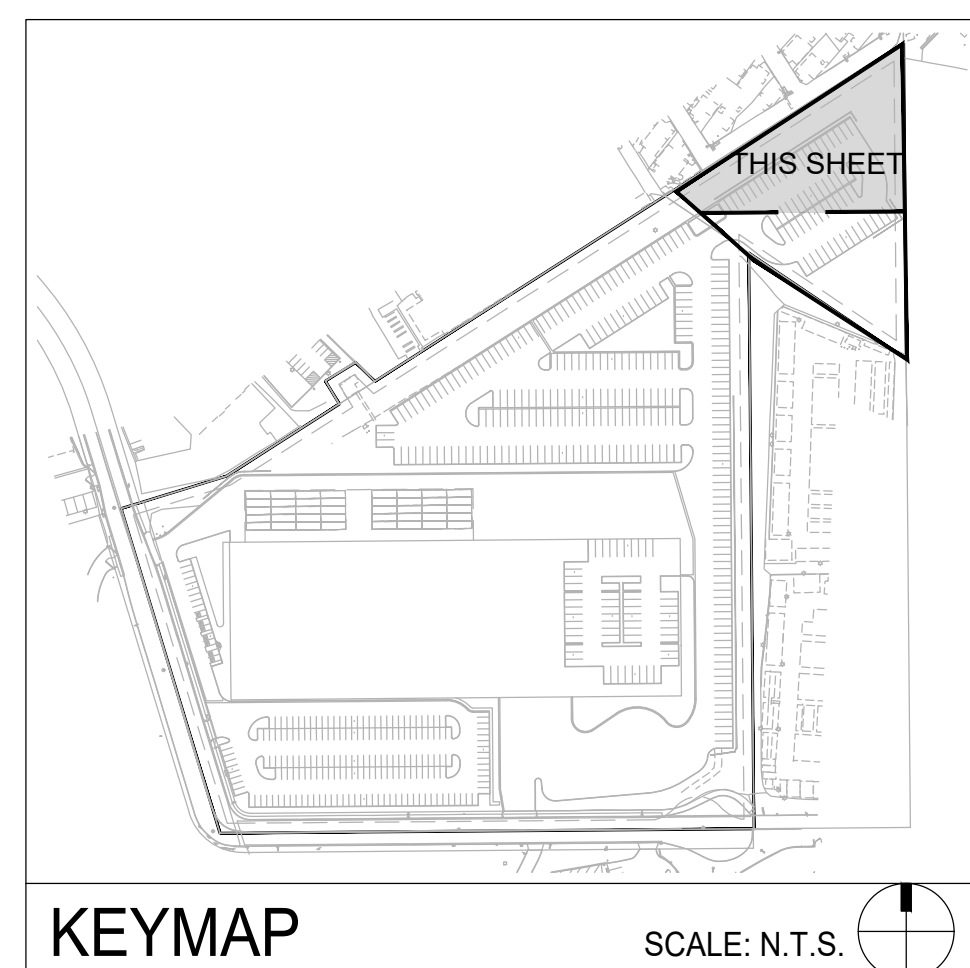
PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / FORM	MIN. SIZE	WATER USE	DETAIL	QTY.
TREES							
	QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX STD.	8'H X 3'W X 1" CAL.	L	A-B, SHT. 14	7
	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	24" BOX STD.	10'H X 3'W X 1" CAL.	L	A-B, SHT. 14	11
	LOPHOSTEMON CONFERTUS	BRISBANE BOX	24" BOX STD.	10'H X 4'W X 1" CAL.	M	A-B, SHT. 15	14
	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	15 GAL.	6'H X 3'W X 3/4" CAL.	L	A-B, SHT. 14	9

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DETAIL	QTY.
SHRUBS, GRASSES & GROUNDCOVERS							
	MYOPORUM PARVIFOLIUM 'PINK'	PINK MYOPORUM	1 GAL.	36" O.C.	L	C-E, SHT. 14	1766
	BACCHARIS P. TWIN PEAKS	DWARF COYOTE BRUSH	1 GAL.	48" O.C.	L	C-E, SHT. 14	724
	COTONEASTER HORIZONTALIS	ROCKSPRAY COTONEASTER	1 GAL.	48" O.C.	L	C-E, SHT. 14	203
	HETEROMELES ARBUTIFOLIA	TOYON	15 GAL.	6' O.C.	L	C-E, SHT. 14	98
	LAN TANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.	36" O.C.	L	C-E, SHT. 14	289
	MUHLENBERGIA E. 'EL TORO'	BULL GRASS	1 GAL.	30" O.C.	L	C-E, SHT. 14	493
	WESTRINGIA FRUTICOSA	COAST ROSEMARY	5 GAL.	36" O.C.	L	C-E, SHT. 14	33
	DISTICTIS BUCCINATORIA	RED TRUMPET VINE	15 GAL.	PER PLAN	M	C, SHT. 15	49

EXISTING PLANTING
EXISTING SHRUBS AND GROUNDCOVER TO BE PROTECTED IN PLACE.

WATER USE KEY:
VL = VERY LOW WATER USE, L = LOW WATER USE, M = MODERATE WATER USE, H = HIGH WATER USE. WATER USE STATED IS PER 'WATER USE CLASSIFICATION OF LANDSCAPE SPECIES' (ALSO REFERRED TO AS WUCOLS IV) FOR THE CITY OF SPRING VALLEY.



RECORD PLAN BY: LUKE A. CORSBIE R.C.E. 72588 EXPIRES: 06-30-22		PRIVATE CONTRACT SHEET 12 COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS 15 SHEETS PLANTING PLAN DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978 CALIFORNIA COORDINATE INDEX 202-1779 APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER ENGINEER OF WORK: R.C.E.: DATE: GRADING PERMIT NO. PDS2021-LDGRMJ-XXXX	
BENCH MARK DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013" LOCATION: TOP OF CURB INLET ON E'LY SIDE OF JAMACHA BLVD. RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B ELEVATION: 518.044 USFS DATUM: NAVD 1988			

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

ENGINEER'S NAME: WARE MALCOMB
PHONE NO. (858)638-7277 // EMAIL: waremalcomb.com

MATCHLINE - SEE SHEET 12

PLANTING NOTES

- REFER TO PLANTING SPECIFICATIONS AND DETAILS FOR SOIL PREPARATION, FERTILIZATION, MULCHING AND OTHER PLANTING INFORMATION.
- NOTIFY THE OWNER'S AUTHORIZED REPRESENTATIVE AND THE CITY INSPECTOR 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE WORK. NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY SHOULD FIELD CONDITIONS VARY FROM THOSE SHOWN ON PLAN.
- REPORT DISCREPANCIES IN THE DRAWINGS OR BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT. CORRECTED DRAWINGS OR INSTRUCTION SHALL BE ISSUED PRIOR TO THE CONTINUATION OF THIS WORK. ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY CORRECTIONS DUE TO FAILURE TO REPORT KNOWN DISCREPANCIES.
- LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND PROTECT THEM FROM DAMAGE. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY AND ASSUME FULL RESPONSIBILITY FOR EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH DAMAGED UTILITIES.
- LOCATION OF N.I.C. CONSTRUCTION ELEMENTS SUCH AS LIGHTS, SIGNS, VENTS, HYDRANTS, TRANSFORMERS, ETC. ARE APPROXIMATE. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY SHOULD THE LOCATION OF THESE ITEMS INTERFERE WITH THE PROPER EXECUTION OF WORK.
- PROVIDE PRE-PLANT WEED CONTROL IN ALL PROPOSED PLANTER AREAS, PER SPECIFICATIONS, PRIOR TO START OF PLANTING. WEED CONTROL INCLUDES ERADICATION OF ALL EXISTING WEED PLANTS, AS WELL AS VIABLE SEEDS AND ROOTS. USE A NON-SELECTIVE SYSTEMIC CONTACT HERBICIDE, APPLIED PER MANUFACTURER'S RECOMMENDATIONS AND LEAVE SPRAYED PLANTS INTACT FOR AT LEAST 14 DAYS BEFORE REMOVING BY MOWING OR GRUBBING. APPLY WATER BY IRRIGATION OR BY HAND FOR 10 DAYS AS REQUIRED TO ACHIEVE WEED GERMINATION, AND THEN RE-APPLY CONTACT HERBICIDES PER ABOVE. REPEAT AS REQUIRED TO ELIMINATE ALL WEEDS PRIOR TO PROCEEDING WITH PLANTING OPERATIONS.
- OBTAIN ALL SOIL FOR LANDSCAPE PLANTING AREAS OR BERMS FROM ON-SITE EXCAVATIONS. SHOULD IMPORT SOIL BE NECESSARY, SUBMIT IMPORT SOIL TESTING RESULTS FOR APPROVAL PRIOR TO IMPORTATION. SOIL SHALL BE SANDY LOAM CONTAINING NO TOXIC CHEMICALS OR ELEMENTS WHICH MAY INHIBIT OR RETARD NORMAL PLANT GROWTH.
- AFTER ROUGH GRADES HAVE BEEN ESTABLISHED IN PLANTING AREAS, HAVE SOIL SAMPLES TAKEN AT THE LOCATIONS INDICATED ON PLANTING PLAN. HAVE SAMPLES TESTED BY WAYPOINT ANALYTICAL, (800) 264-4522, FOR SOIL FERTILITY. TAKE TWO SAMPLES AT EACH LOCATION: (1) GROUND LEVEL TO 10" DEEP, (2) 24" TO 36" DEEP. EACH SAMPLE SHALL CONTAIN APPROXIMATELY 1 QUART OF SOIL TO BE LABELED PER LOCATION AND DEPTH. INSTALL SOIL PREPARATION AND BACK FILL MIX TO CONFORM TO THESE RECOMMENDATIONS ONLY UPON RECEIPT OF WRITTEN CHANGE ORDER FROM THE OWNER. SUBMIT SOIL REPORT TO LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- ENSURE THAT ROUGH GRADING HAS BEEN CERTIFIED BY CIVIL ENGINEER AND THAT CIVIL ENGINEER OR OWNER'S AUTHORIZED REPRESENTATIVE HAS APPROVED FINE GRADING TO 1/10TH OF A FOOT PRIOR TO BEGINNING SOIL PREPARATION OPERATIONS. PROVIDE FOR INCLUSION OF ALL AMENDMENTS, SETTLING, ETC. IN DETERMINATION OF FINAL GRADES.
- ASSURE POSITIVE DRAINAGE IN ALL PLANTING AREAS, 2% MINIMUM.
- LOCATE AND TAG ALL PLANT MATERIAL. MATERIAL SHALL BE IN CONFORMANCE WITH PLANTING PLAN DESCRIPTIONS AND SPECIFICATIONS. ALL PLANT MATERIAL IS SUBJECT TO REVIEW AND APPROVAL PRIOR TO INSTALLATION. PROVIDE PHOTOS OF REPRESENTATIVE EXAMPLES OF EACH TAGGED BLOCK TO LANDSCAPE ARCHITECT MINIMUM 21 DAYS BEFORE ANTICIPATED DELIVERY. PHOTOS SHALL INCLUDE A PERSON FOR SCALE PURPOSES. LANDSCAPE ARCHITECT MAY OPT TO REVIEW MATERIAL AT GROWING NURSERY. MATERIAL DELIVERED TO THE SITE MAY BE REJECTED BASED ON UNHEALTHY APPEARANCE OR NON-CONFORMANCE WITH SPECIFICATIONS EVEN IF PREVIOUSLY REVIEWED BY THE LANDSCAPE ARCHITECT OR THE OWNER.
- FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- PLANTING QUANTITIES ARE GIVEN FOR CONVENIENCE ONLY. PLANT SYMBOLS AND SPECIFIED SPACING SHALL TAKE PRECEDENCE.
- AT EDGES OF PLANTING AREAS, THE CENTER LINE OF THE LAST ROW OF SHRUBS AND/OR GROUND COVER SHALL BE LOCATED AT ONE-HALF THE SPECIFIED ON CENTER SPACING FROM THE EDGE.
- INSTALL GROUND COVER AND/OR SHRUB MASSES WITH TRIANGULAR SPACING UNLESS OTHERWISE INDICATED.
- ALL CURVE TO CURVE AND CURVE TO TANGENT LINES SHALL BE NEAT, TRIM, SMOOTH AND UNIFORM.
- REMOVE ALL NURSERY STAKES AND ESPALIER RACKS IMMEDIATELY AFTER INSTALLATION UPON PROVIDING SUPPORT PER PLAN.
- DURING THE LENGTH OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER STAKING AND/OR GUYING OF TREES TO ENSURE STABILITY.
- MULCH ALL LANDSCAPE AREAS (EXCLUDING TURF AND BIO-RETENTION BASIN BOTTOMS) WITH A 3" DEEP LAYER OF .5"-1.5" FOREST FLOOR BARK MULCH BY AGUINAGA GREEN OR APPROVED EQUAL, AT THE CONCLUSION OF PLANTING OPERATIONS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
- KEEP BARK MULCH 4-INCHES CLEAR FROM BASE OF TREES, SHRUBS, GRASSES, AND SUCCULENTS.
- CONTRACTOR SHALL REPLACE ANY EXISTING PLANT MATERIAL WHICH IS DAMAGED BY CONSTRUCTION OPERATIONS. REPLACEMENT PLANT MATERIAL MUST BE OF MATCHING SPECIES, INSTALLED FROM THE FOLLOWING MINIMUM SIZE: 15-GALLON TREE, 1-GALLON SHRUB, FLATTED GROUNDCOVER AND SODDED TURF.
- INSTALLATIONS THAT ARE ADJACENT OPEN SPACE, NATURALIZED SLOPES OR UNDEVELOPED LAND ARE SUBJECT TO DAMAGE BY RODENTS OR DEER AND SHALL BE TREATED WITH AN APPROPRIATE REPELLENT IN A SPRAY AND/OR TABLET FORM. REPELLEX BY GROPOWER OR APPROVED EQUAL, THAT PROVIDES IMMEDIATE AND LONG TERM PROTECTION, SHALL BE USED.
- INSTALL TEMPORARY EROSION CONTROL MATTING (SC-150 BY NORTH AMERICAN GREEN OR APPROVED EQUAL) ON ALL SLOPES 3:1 AND STEEPER AND 3' AND GREATER IN HEIGHT. SECURE NETTING IN PLACE WITH 9" LONG GALVANIZED SOIL STAPLES AT 12" O.C. ALONG THE TOP OF THE SLOPE AND 5' O.C. DOWN THE SLOPE IN BOTH DIRECTIONS. PROVIDE MINIMUM 24" OVERLAP AT TOP AND BOTTOM AND 36" OVERLAP ALONG THE SIDES.
- ROOT BARRIERS SHALL BE INSTALLED AT ALL TREES WITHIN 5 FEET OF ANY HARDSCAPE, PAVEMENT OR CURB. ROOT BARRIERS ARE TO BE 'UB24'-2" BY DEEP ROOT CORPORATION, (800) 458-7668, INSTALLED PER MANUFACTURER'S SPECIFICATIONS. NOTE: ROOT BARRIERS SHALL NOT BE WRAPPED AROUND THE ROOTBALL. ROOT BARRIERS INSTALLED ADJACENT TO A BIOSWALE SHALL NOT INTERFERE WITH DRAINAGE TO OR FROM THE BIOSWALE SYSTEM.
- ANNUAL COLOR TO BE SELECTED BY LANDSCAPE ARCHITECT AT TIME OF INSTALLATION. REQUEST RECOMMENDATION A MINIMUM OF 48 HOURS IN ADVANCE OF NEED FOR DELIVERY.

NOTE: LANDSCAPE WILL BE AUTOMATICALLY IRRIGATED AND COMPLIANT WITH THE COUNTY'S WATER CONSERVATION IN LANDSCAPING ORDINANCE.

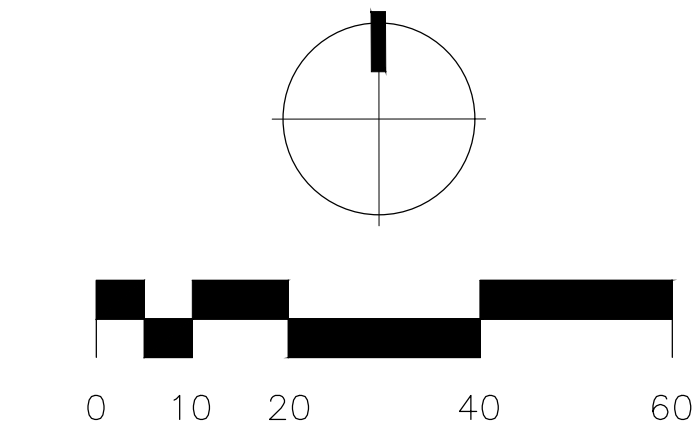


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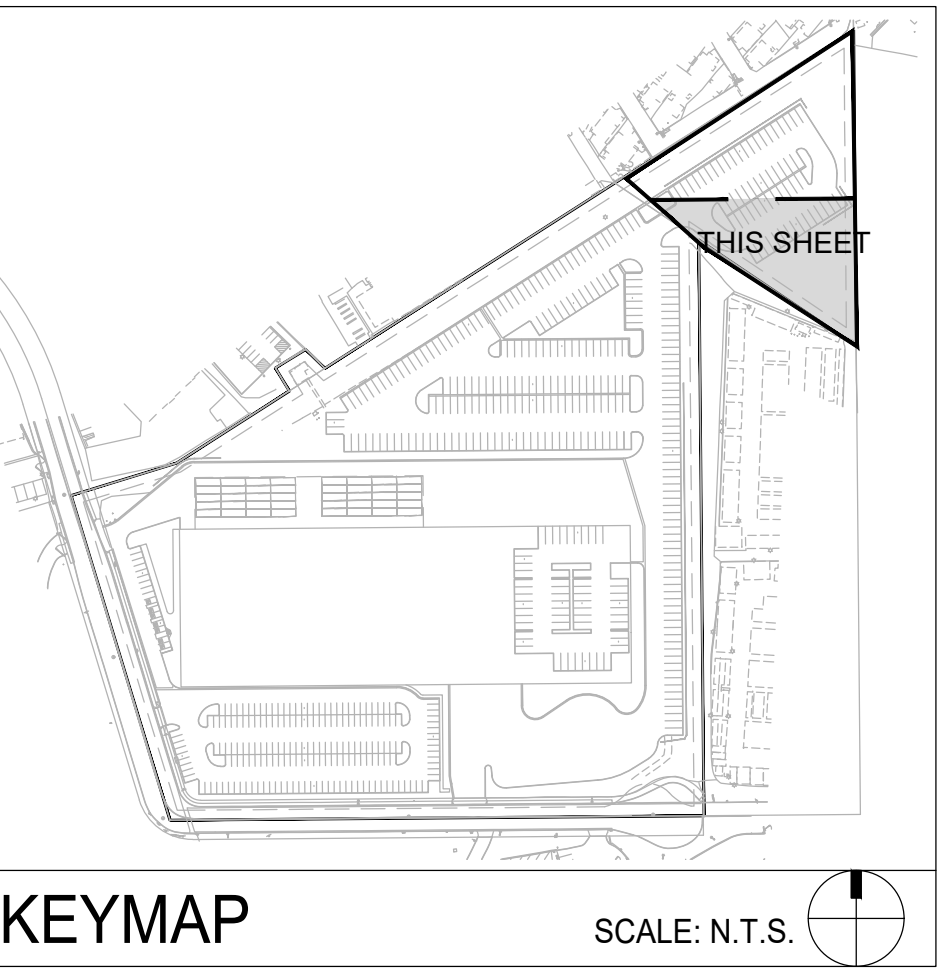
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FOR PLANTING DETAILS - SEE SHEET 14
FOR LANDSCAPE SPECIFICATIONS - SEE SEPARATE BOOKLET



COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE: _____
R.C.E. 72588	EXPIRES: 06-30-22
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON ELY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USSF	DATUM: NAVD 1988
DATUM: _____	



PRIVATE CONTRACT		
SHEET 13	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	X5 SHEETS
PLANTING PLAN DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN COUNTY ENGINEER		ENGINEER OF WORK:
BY: _____ DATE: _____	R.C.E.: _____ DATE: _____	
GRADING PERMIT NO. PDS2021-LDGRMJ-XXXXX		

PLANT SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE / FORM	MIN. SIZE	WATER USE	DETAIL	QTY.
TREES							
	QUERCUS AGRIFOLIA	COAST LIVE OAK	24" BOX STD.	8'H X 3'W X 1" CAL.	L	A-B, SHT. 14	7
	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	24" BOX STD	10'H X 3'W X 1" CAL.	L	A-B, SHT. 14	11
	LOPHOSTEMON CONFERTUS	BRISBANE BOX	24" BOX STD.	10'H X 4'W X 1" CAL.	M	A-B, SHT. 15	14
	GEIJERA PARVIFLORA	AUSTRALIAN WILLOW	15 GAL.	6'H X 3'W X 3/4" CAL.	L	A-B, SHT. 14	9
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	WATER USE	DETAIL	QTY.
SHRUBS, GRASSES & GROUNDCOVERS							
	MYOPORUM PARVIFOLIUM ' PINK'	PINK MYOPORUM	1 GAL.	36" O.C.	L	C-E, SHT. 14	1766
	BACCHARIS P. TWIN PEAKS	DWARF COYOTE BRUSH	1 GAL.	48" O.C.	L	C-E, SHT. 14	724
	COTONEASTER HORIZONTALIS	ROCKSPRAY COTONEASTER	1 GAL.	48" O.C.	L	C-E, SHT. 14	203
	HETEROMELES ARBUTIFOLIA	TOYON	15 GAL.	6' O.C.	L	C-E, SHT. 14	98
	LANTANA 'NEW GOLD'	NEW GOLD LANTANA	1 GAL.	36" O.C.	L	C-E, SHT. 14	289
	MUHLENBERGIA E. 'EL TORO'	BULL GRASS	1 GAL.	30" O.C.	L	C-E, SHT. 14	493
	WESTRINGIA FRUTICOSA	COAST ROSEMARY	5 GAL.	36" O.C.	L	C-E, SHT. 14	33
	DISTICTIS BUCCINATORIA	RED TRUMPET VINE	15 GAL.	PER PLAN	M	C, SHT. 15	49
EXISTING PLANTING							
	EXISTING SHRUBS AND GROUNDCOVER TO BE PROTECTED IN PLACE.						
WATER USE KEY: VL = VERY LOW WATER USE, L = LOW WATER USE, M = MODERATE WATER USE, H = HIGH WATER USE. WATER USE STATED IS PER 'WATER USE CLASSIFICATION OF LANDSCAPE SPECIES' (ALSO REFERRED TO AS WUCOLS IV) FOR THE CITY OF SPRING VALLEY.							



- NOTES:
- A. KEEP MULCH 4" CLEAR OF CROWN, TYPICAL.
 - B. ROOTS MUST NOT BE ROOT BOUND. LOOSEN ANY TIGHTLY PACKED ROOTS.

SCALE: 3/4" = 1'-0"



- NOTES:
- A. FINISH GRADE OF SLOPE AFTER PLANTING SHALL NOT EXCEED 1:1 GRADIENT. INSTALL EROSION CONTROL FABRIC AS REQUIRED TO CONTROL EROSION DURING PLANT ESTABLISHMENT. SEE PLANTING NOTES FOR INFORMATION REGARDING EROSION CONTROL FABRIC.
 - B. KEEP MULCH 4" CLEAR OF CROWN, TYPICAL.
 - C. ROOTS MUST NOT BE ROOT BOUND. LOOSEN ANY TIGHTLY PACKED ROOTS.

SCALE: 3/4" = 1'-0"



- A. ALL SHRUBS / GROUND COVERS TO BE PLANTED AT EQUAL SPACING (TRIANGULAR) UNLESS OTHERWISE INDICATED ON PLANS. SEE LEGEND FOR SPACING REQUIREMENTS.
- B. PLANTING MATERIAL AT THE EDGE OF PLANTER AREAS SHALL BE LOCATED $\frac{1}{2}$ OF THE ON-CENTER SPACING DISTANCE INDICATED IN THE LEGEND. FOR EXAMPLE, IF SPACING IS INDICATED AS 24" ON CENTER, PLANTS AT THE EDGE OF THE PLANTER SHALL BE LOCATED 12" FROM THE EDGE.
- C. PLANT SPACING INDICATED IN THE PLANTING LEGEND IS THE MAXIMUM ALLOWED SPACING. IN NARROW PLANTER AREAS, SPACING MAY NEED TO BE REDUCED IN ORDER TO MAINTAIN THE MAXIMUM ON-CENTER SPACING AND SPACING FROM EDGE OF PLANTER AS INDICATED ON THIS DETAIL.

SCALE: 3/4" = 1'-0"



- NOTES:
- A. ENSURE THAT TREE TIES ARE INSTALLED LOOSE ENOUGH TO ALLOW FOR ADEQUATE TRUNK MOVEMENT.
 - B. INSTALL STANDPIPE FOR 24" BOX TREES AND LARGER TREES ONLY.
 - C. SLOPE BOTTOM OF PLANTING PIT TO SUMP AT 2% MINIMUM.
 - D. KEEP MULCH 4" CLEAR OF TRUNK, TYPICAL.
 - E. FINISH GRADE OF SLOPE AFTER PLANTING - SHALL NOT EXCEED 1:1 GRADIENT. INSTALL EROSION CONTROL FABRIC AS REQUIRED TO CONTROL EROSION DURING PLANT ESTABLISHMENT. SEE PLANTING NOTES FOR INFORMATION REGARDING EROSION CONTROL FABRIC.

SCALE: 3/8" = 1'-0"



1. (4) VIT RUBBER "CINCH TIES" - ATTACH TO WOOD STAKES IN A FIGURE EIGHT PATTERN WITH GALVANIZED ROOFING NAILS.
 2. (2) 2" DIA. X 10' WOOD STAKES FOR 24" BOX AND SMALLER TREES OR (2) 3" DIA. X 10' WOOD STAKES FOR 36" BOX AND LARGER TREES. STAKES TO BE UNTREATED 1 LODGEPOLE PINE WITH TAPERED POINTS AND CHAMFERED TOPS. CUT TOP OF STAKES IF DIRECTED BY LANDSCAPE ARCHITECT. DO NOT ALLOW TOP OF STAKES TO EXTEND INTO TREE CANOPY. LONGER 12' LONG STAKES ARE TO BE USED, AS NECESSARY, TO PROVIDE ADDITIONAL SUPPORT FOR TALL AND/OR TOP-HEAVY TREES
 3. WATER BASIN - 3" MINIMUM DEPTH. REMOVE BASIN IN LAWN AREAS AND AS DIRECTED BY LANDSCAPE ARCHITECT.
 4. AMENDED BACKFILL PER SPECIFICATIONS.
 5. SCARIFY SIDES AND BOTTOM OF TREE PIT.
 6. NATIVE UNDISTURBED SOIL.
 7. AFTER SETTLING TREE, SET TOP OF ROOTBALL 3" ABOVE SURROUNDING FINISH GRADE AND SLOPE GRADE FOR DRAINAGE.
 8. CREATE A 45 DEGREE CHAMFERED PEDESTAL FROM UNDISTURBED NATIVE SOIL TO REDUCE TREE SETTLEMENT.
 9. INSTALL (2) 4" DIA. SDR 35 PERFORMED SEWER STANDPIPE WITH DRAIN SOCK AT LOW-END OF TREE PIT. PAINT TOP 6" OF STANDPIPE BLACK. TERMINATE TOP OF STANDPIPES WITH BLACK NDS #11 (4" ROUND) GRATES. INSTALL TOP OF GRATE 2" ABOVE FINISH GRADE. ORIENT STANDPIPES IN SAME LOCATION AT EACH TREE GROUPING TO FACILITATE VERIFICATION AND MAINTENANCE. STANDPIPES TO BE LOCATED IN OPPOSING CORNERS OF PLANT PIT.
 10. TREE - PLUMB AND CENTER IN PIT.
 11. PLANT TABLET PER SPECIFICATION.
- NOTES:
- A. ENSURE THAT TREE TIES ARE INSTALLED LOOSE ENOUGH TO ALLOW FOR ADEQUATE TRUNK MOVEMENT.
 - B. INSTALL STANDPIPE FOR 24" BOX TREES AND LARGER TREES ONLY.
 - C. SLOPE BOTTOM OF PLANT PIT TO SUMP AT 2% MINIMUM.
 - D. KEEP MULCH 4" CLEAR OF TRUNK, TYPICAL.
 - E. AT TURF AREAS, MAINTAIN TURF AT 12" CLEAR FROM BASE OF TRUNK AND INSTALL "ARBOR GARD" TRUNK PROTECTOR.

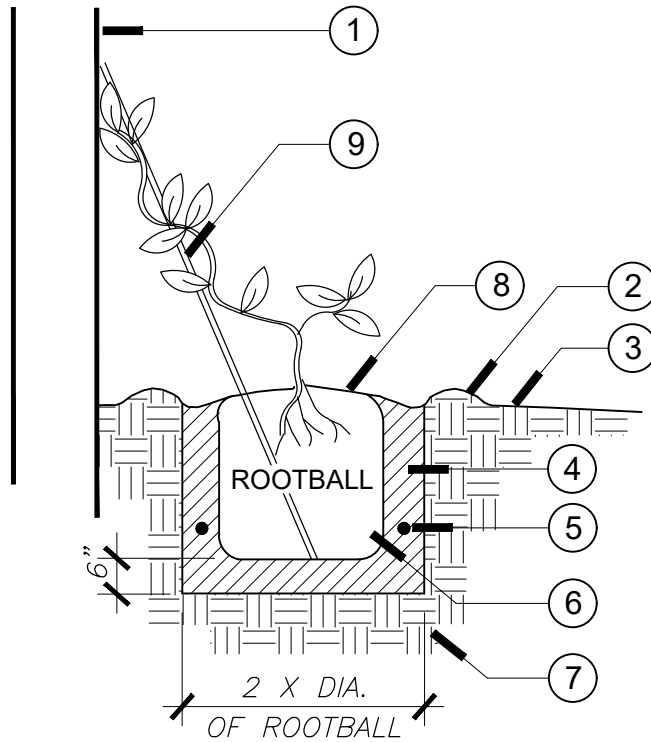
SCALE: 3/8" = 1'-0"



COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: _____	DATE: _____
LUKE A. CORSBIE	
R.C.E. _____	_____
72588	
EXPIRES: _____	_____
06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY	
SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON E'LY SIDE OF JAMACHA BLVD.	
RECORD FROM SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USSF	DATUM: NAVD 1988
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PRIVATE CONTRACT			
SHEET 14		COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
PLANTING DETAILS DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978 CALIFORNIA COORDINATE INDEX _____ 202-1779			
APPROVED FOR WILLIAM P. MORGAN, COUNTY ENGINEER		ENGINEER OF WORK: R.C.E.: _____ DATE: _____	
BY: _____ DATE: _____		GRADING PERMIT NO: PDS2021-LDGRMJ-XXXXXX	

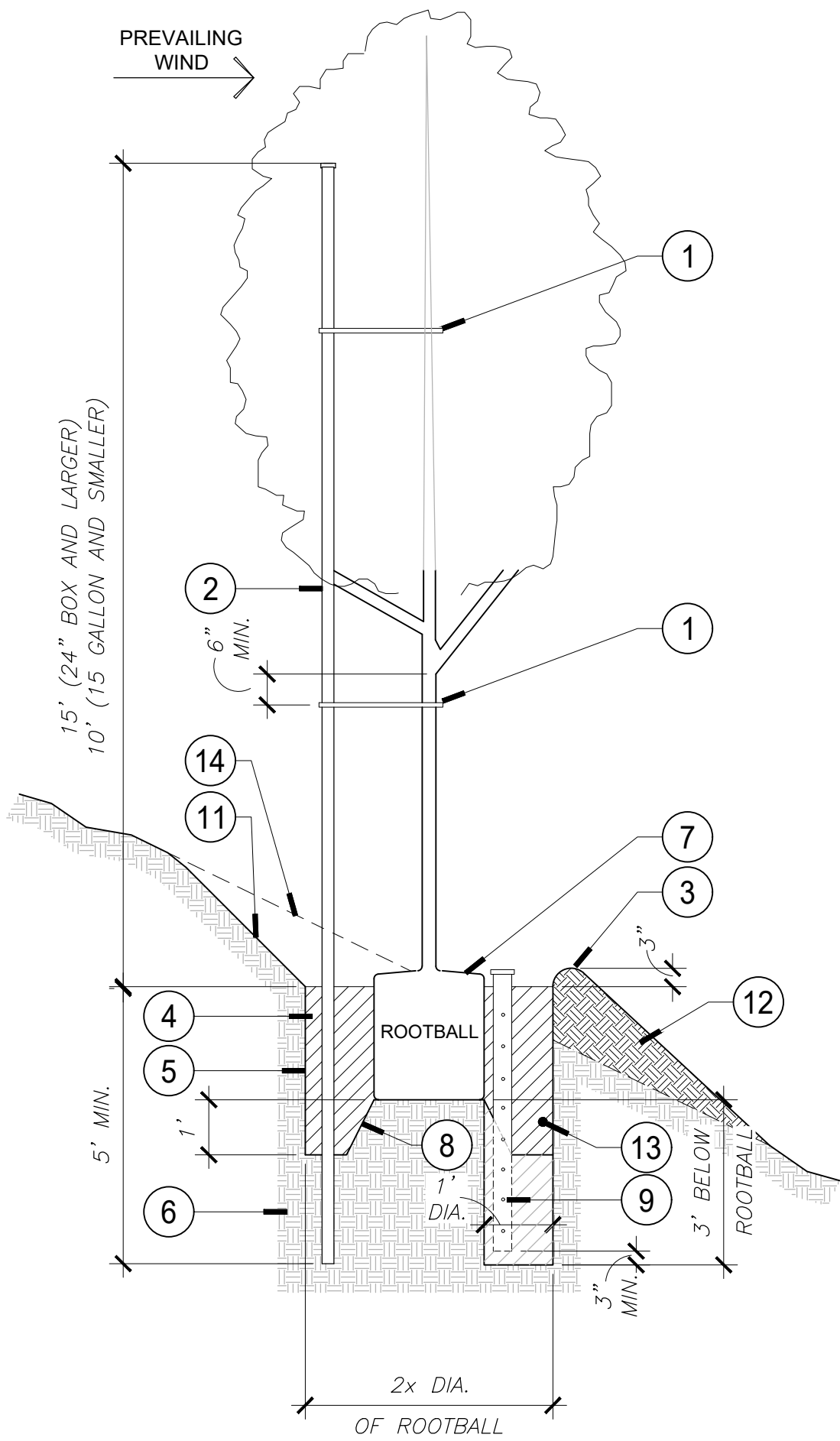


LEGEND:

1. WALL, FENCE OR TRELLIS, PER PLAN.
2. WATERING BASIN - MIN. 4" DEPTH. REMOVE BASIN AFTER MAINTENANCE PERIOD.
3. FINISH GRADE.
4. AMENDED BACKFILL MIX - SEE SPECIFICATIONS. TAMP OR WATER SETTLE SO THAT PLANT DOES NOT SINK AFTER PLANTING.
5. FERTILIZING TABLETS PER SPECIFICATIONS.
6. ROOTBALL OF PLANT - MUST NOT BE ROOTBOUND. LOOSEN ANY TIGHT-PACKED ROOTS. PLACE AS CLOSELY AS PRACTICAL TO WALL, FENCE OR TRELLIS.
7. EXISTING SOIL.
8. "CROWN" OF PLANT - MUST NOT BE BURIED BELOW LEVEL OF SURROUNDING SOIL.
9. ADJUST NURSERY STAKE TO LEAN AGAINST WALL FOR VINE SUPPORT.

C VINE PLANTING

SCALE: 1" = 1'-0"



SECTION:

LEGEND:

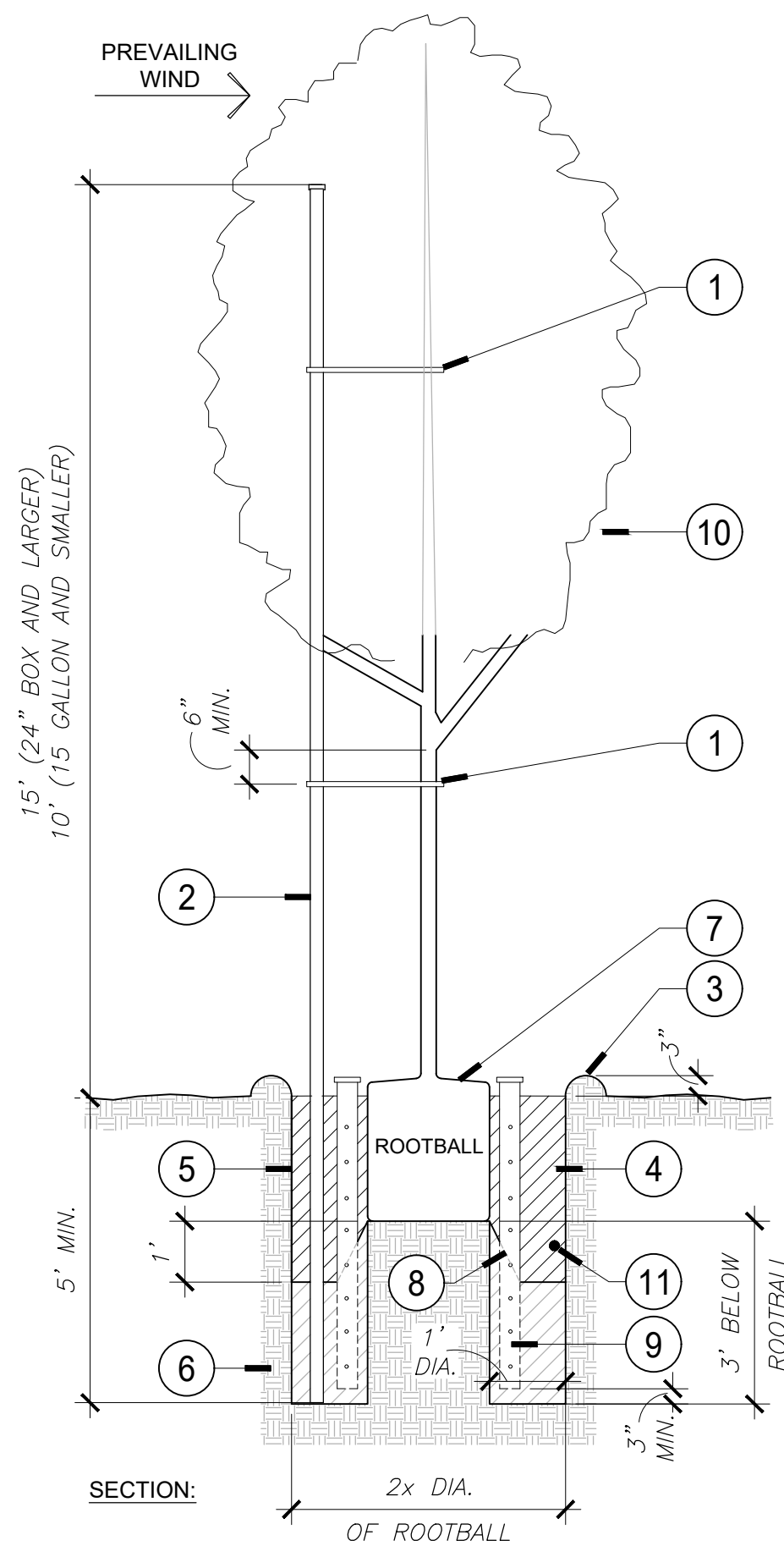
1. (2) VIT RUBBER "CINCH TIES" - ATTACH TO WOOD STAKES IN A FIGURE EIGHT PATTERN WITH GALVANIZED ROOFING NAILS.
2. (1) 1-1/2" DIA. X EITHER 15' LONG (15 GALLON AND SMALLER TREES) OR 20' LONG (24" BOX TREES AND LARGER) SCH 40 GALVANIZED METAL POLE WITH THREADED CAP AT END OF POLE. EMBED POLE 5' MINIMUM BELOW FINISH GRADE.
3. WATER BASIN - 3" MINIMUM DEPTH. REMOVE BASIN IN LAWN AREAS AND AS DIRECTED BY LANDSCAPE ARCHITECT.
4. AMENDED BACKFILL PER SPECIFICATIONS.
5. SCARIFY SIDES AND BOTTOM OF PLANTING PIT.
6. NATIVE UNDISTURBED SOIL.
7. AFTER SETTLING TREE, SET TOP OF ROOTBALL 3" ABOVE SURROUNDING FINISH GRADE AND SLOPE GRADE FOR DRAINAGE.
8. CREATE A 45 DEGREE CHAMFERED PEDESTAL FROM UNDISTURBED NATIVE SOIL TO REDUCE TREE SETTLEMENT.
9. INSTALL (1) 4" DIA. SDR 35 PERFORATED PVC STANDPIPE WITH DRAIN SOCK AT LOW-END OF PLANTING PIT. PAINT TOP 6" OF STANDPIPE BLACK. TERMINATE TOP OF STANDPIPES WITH BLACK NDS #11 (4" ROUND) GRATES. INSTALL TOP OF GRATE 2" ABOVE FINISH GRADE. ORIENT STANDPIPE IN SAME LOCATION AT EACH TREE GROUPING TO FACILITATE VERIFICATION AND MAINTENANCE.
10. TREE - PLUMB AND CENTER IN PIT.
11. CUT SLOPE TO MEET PLANTING PIT.
12. NEW FILL - COMPACT TO 85% RELATIVE COMPACTION.
13. PLANT TABLET PER SPECIFICATION.
14. FINISH GRADE OF SLOPE BEYOND.

NOTES:

- A. ENSURE THAT TREE TIES ARE INSTALLED LOOSE ENOUGH TO ALLOW FOR ADEQUATE TRUNK MOVEMENT.
- B. INSTALL STANDPIPE FOR 24" BOX TREES AND LARGER TREES ONLY.
- C. SLOPE BOTTOM OF PLANTING PIT TO SUMP AT 2% MINIMUM.
- D. KEEP MULCH 4" CLEAR OF TRUNK, TYPICAL.
- E. FINISH GRADE OF SLOPE AFTER PLANTING - SHALL NOT EXCEED 1:1 GRADIENT. INSTALL EROSION CONTROL FABRIC AS REQUIRED TO CONTROL EROSION DURING PLANT ESTABLISHMENT. SEE PLANTING NOTES FOR INFORMATION REGARDING EROSION CONTROL FABRIC.

B BRISBANE BOX PLANTING ON SLOPE

SCALE: NTS



SECTION:

LEGEND:

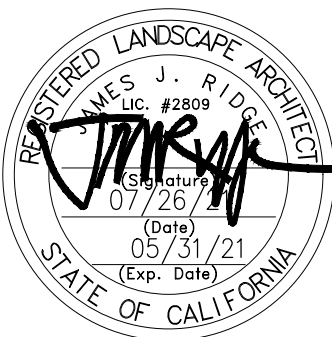
1. (2) VIT RUBBER "CINCH TIES" - ATTACH TO WOOD STAKES IN A FIGURE EIGHT PATTERN WITH GALVANIZED ROOFING NAILS.
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3. WATER BASIN - 3" MINIMUM DEPTH. REMOVE BASIN IN LAWN AREAS AND AS DIRECTED BY LANDSCAPE ARCHITECT.
4. AMENDED BACKFILL PER SPECIFICATIONS.
5. SCARIFY SIDES AND BOTTOM OF PLANTING PIT.
6. NATIVE UNDISTURBED SOIL.
7. AFTER SETTLING TREE, SET TOP OF ROOTBALL 3" ABOVE SURROUNDING FINISH GRADE AND SLOPE GRADE FOR DRAINAGE.
8. CREATE A 45 DEGREE CHAMFERED PEDESTAL FROM UNDISTURBED NATIVE SOIL TO REDUCE TREE SETTLEMENT.
9. INSTALL (2) 4" DIA. SDR 35 PERFORATED PVC STANDPIPE WITH DRAIN SOCK AT OPPOSITE SIDES OF PLANTING PIT. PAINT TOP 6" OF STANDPIPE BLACK. TERMINATE TOP OF STANDPIPES WITH BLACK NDS #11 (4" ROUND) GRATES. INSTALL TOP OF GRATE 2" ABOVE FINISH GRADE. ORIENT STANDPIPES IN SAME LOCATION AT EACH TREE GROUPING TO FACILITATE VERIFICATION AND MAINTENANCE. PLANTING PIT TO DRAIN TOWARD STANDPIPES.
10. TREE - PLUMB AND CENTER IN PIT.
11. PLANT TABLET PER SPECIFICATION.

NOTES:

- A. ENSURE THAT TREE TIES ARE INSTALLED LOOSE ENOUGH TO ALLOW FOR ADEQUATE TRUNK MOVEMENT.
- B. INSTALL STANDPIPE FOR 24" BOX TREES AND LARGER TREES ONLY.
- C. SLOPE BOTTOM OF PLANTING PIT TO SUMP AT 2% MINIMUM.
- D. KEEP MULCH 4" CLEAR OF TRUNK, TYPICAL.
- E. AT TURF AREAS, MAINTAIN TURF AT 12" CLEAR FROM BASE OF TRUNK AND INSTALL 'ARBOR GARD' TRUNK PROTECTOR.

A BRISBANE BOX PLANTING

SCALE: 3/8" = 1'-0"



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RIDGELA.COM



WARE MALCOMB
CIVIL ENGINEERING
3391 sorrento valley blvd. suite 120 san diego, ca 92121
p 858.638.7277 waremalcomb.com

COUNTY APPROVED CHANGES			
NO.	DESCRIPTION:	APPROVED BY:	DATE:

RECORD PLAN	
BY: LUKE A. CORSBIE	DATE: _____
R.C.E. 72588	
EXPIRES: 06-30-22	
BENCH MARK	
DESCRIPTION: 3.25" BRASS DISK STAMPED "SAN DIEGO COUNTY SURVEYOR, SURVEY CONTROL, SWRF4, 2013"	
LOCATION: TOP OF CURB INLET ON E'LY SIDE OF JAMACHA BLVD.	
RECORD FROM: SURVEY NO. 22057 AND GEOID MODEL 12B	
ELEVATION: 518.044 USFS	DATUM: NAVD 1988
	DATUM: _____

PRIVATE CONTRACT		
SHEET 15	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	15 SHEETS
PLANTING DETAILS DIB2-TRIANGULAR LOT 12XXX SWEETWATER SPRINGS BLVD. SPRING VALLEY, CA 91978		
CALIFORNIA COORDINATE INDEX 202-1779		
APPROVED FOR WILLIAM P. MORGAN, COUNTY ENGINEER	ENGINEER OF WORK:	
BY: _____ DATE: _____	R.C.E.: _____	DATE: _____
	GRADING PERMIT NO. PDS2021-LDGRMJ-XXXXX	